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United States
Department of
Agriculture

Forest Service

Pacific
Northwest
Region



Final Environmental Impact Statement
for the

LOWER WHITE SALMON

National Wild and Scenic River
Management Plan





FLMPL	Federal Land Management Plan
FS	Forest Service
HPA	Hydraulics Project Approval
LAC	Limits of Acceptable Change
LEIS	Legislative Environmental Impact Statement
LWA	Land & Water Associates
MBF	Thousand board feet
MIS	Management Indicator Species
MMBF	Million board feet
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NPPC	Northwest Power Planning Council
NRHP	National Register of Historic Places
OHWM	Ordinary High Water Mark
OR	Outstandingly Remarkable
PILT	Payment in lieu of taxes
PL	Public Law
PP&L	Pacific Power and Light Company
RCW	Revised Code of Washington
RLZ	Resource Lands Zone
RM	River Mile
ROS	Recreation Opportunity Spectrum
ROW	Right-of-way
RVD	Recreation visitor-day
SCS	Soil Conservation Service
SDS	SDS Lumber Company
SEPA	Washington State Environmental Policy Act
SMP	Shorelines Master Plan
SOHA	Spotted Owl Habitat Area
T&E	Threatened and Endangered (Species)
TES	Threatened, Endangered or Sensitive (Species)
USC	United States Code
USDA	United States Department of Agricultural
USGS	United States Geological Survey
VQO	Visual quality objective
WDW	Washington Department of Wildlife
WNHP	Washington Natural Heritage Program
W&SR	Wild and Scenic River

Final Environmental Impact Statement
for the
Lower White Salmon River Management Plan

Columbia River Gorge National Scenic Area, Hood River, OR. 97031

November 1991

Lead Agency:	USDA Forest Service
Responsible Official:	Arthur J. Carroll, Area Manager Columbia River Gorge National Scenic Area USDA Forest Service 902 Wasco, Suite 200 Hood River, Oregon 97031 Telephone: (503)386-2333
For Further Information Contact:	Steve Mellor, Project Manager USDA Forest Service Columbia River Gorge National Scenic Area 902 Wasco Avenue Hood River, Oregon 97031 Telephone: (503) 386-2333

ABSTRACT

The USDA Forest Service, in compliance with the National Environmental Policy Act of 1969, is presenting six alternative ways of managing the 7.7 mile White Salmon National Wild and Scenic River.

1. Continue management under current federal, state, and county authorities.
2. Manage to enhance all Wild and Scenic River values and increase the natural character of the area. Administration would be by the Forest Service with an advisory committee of local, regional, national, and tribal interests.
3. Manage to maintain the river's current character. Administration would be by a cooperative management committee of county, state, and federal agencies (including the National Park Service) with an advisory committee, as in Alternative 2.
4. Manage to minimize effects on private landowners while protecting outstandingly remarkable resource values. Administration would be by the Forest Service with a cooperative agreement with the county and an advisory committee, as in Alternatives 2 & 3.
5. Manage for a high level of recreational use, while minimizing effects on landowners and protecting outstandingly remarkable values. Recommend designating the river as a State Scenic River. Administration would be by cooperative management committee, including the Forest Service.
6. Maintain the current character of the river area and provide long-term protection and enhancement of its outstandingly remarkable values (OR). Administration would be by the Forest Service with an agreement with Klickitat County and an advisory committee as in Alternatives 2 & 3.

Alternative 1 is the "No Action" alternative, describing the current management authorities on the lower White Salmon River. Alternative 6 is the Preferred Alternative.

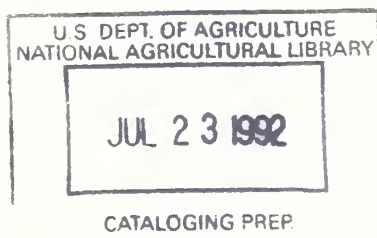


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PHOTO CREDITS

The photograph on page III-22 is by Mary Maj. All other photographs are by Jacqueline Moreau.

SUMMARY

SUMMARY

CHANGES BETWEEN DRAFT EIS AND FINAL EIS

Not many changes have been made to the Summary between the Draft EIS and this document. The changes which have been made result from the process of analyzing the public comments received on the Draft and using that, plus discussions with the Task Force, to develop the Preferred Alternative.

Three of the issues were refined as a result of the public comments and subsequent discussions: the specific location of the boundaries, use of a permit system to limit whitewater recreation use, and determination of biological diversity as an outstandingly remarkable value.

The major changes are the inclusion of the summary of Alternative 6, the Preferred Alternative, and the inclusion of Alternative 6 in the Summary of Effects.

PURPOSE AND NEED

The purpose of this document is to provide a basis for comparing management alternatives and selecting a management plan for the 7.7 mile section of the lower White Salmon River (RM 5-12.7), located above Condit Dam and Northwestern Lake in Klickitat County, Washington. This section of the river was added to the National Wild and Scenic Rivers System through the Columbia River Gorge National Scenic Area (CRGNSA) Act of 1986 (16 USC 544), which specifies that the river will be administered by the Secretary of Agriculture (USDA Forest Service). Neither an eligibility nor a suitability study was performed prior to designation. The river was classified as "Scenic," based on its free-flowing character, the largely undeveloped shorelines and watersheds, and the degree of access from roads. The Wild and Scenic Rivers Act (16 USC 1274, as amended) requires that a comprehensive management plan be developed

within three full fiscal years (October 1 through September 30) after the river is designated.

Because implementation of the management plan will likely cause significant effects and is controversial, it was decided that an environmental impact statement (EIS) would be developed according to the National Environmental Policy Act (NEPA), in order to display the effects of potential management actions.

The Draft EIS presented five management alternatives and a systematic analysis of their potential environmental impacts. It did not include a preferred alternative. It was distributed to federal, state, and local officials and the public in draft form for public review and comment. After considering comments from the public, scientists, and government agencies, the Forest Service prepared this Final EIS which includes a preferred alternative.

The CRGNSA Act also designated a portion of the lower Klickitat River (Klickitat County) as a part of the Wild and Scenic Rivers System, and directed the Secretary of Agriculture (Forest Service) to study portions of both the upper White Salmon and upper Klickitat River for possible inclusion in the Wild and Scenic Rivers System. Studies of the upper river segments and the management plan for the lower Klickitat River are being conducted concurrently with the lower White Salmon River management planning process.

PUBLIC INVOLVEMENT

The primary purpose of an EIS is to assure that all pertinent environmental information and analyses are available to citizens, public officials, and cooperating agencies before decisions are made and actions are taken. An extensive public involvement program was developed during the planning effort to ensure that the process addressed the concerns of landowners, local residents, the Yakima Indian Nation, Klickitat

County, the State of Washington, and others having a stake in how the river is managed. The public involvement program included public meetings, a citizens' Task Force, newsletters and mailings to interested parties, as well as ongoing information meetings with any party requesting them.

TASK FORCE

To ensure that diverse viewpoints were considered throughout the planning process, a broad-based public Task Force was created. The Task Force is comprised of 24 representatives from a wide range of interests concerned about the future of the river: residents, farmers, and ranchers along the White Salmon and Klickitat rivers; Yakima Indian Nation and River People; the Forest Service (Mt. Adams Ranger District); Washington Department of Wildlife; Washington Department of Fisheries; Klickitat County, private river floaters and anglers; commercial outfitters; Pacific Power and Light Company; Mt. Adams Orchards; Friends of the Columbia Gorge; SDS and Champion International timber companies; Friends of the White Salmon, and the Washington Environmental Council.

The Task Force members helped to identify issues, determine the significance of river resources, develop and refine management alternatives, and kept their fellow interest group members informed about the planning process. The group met many times between March and November of 1989. During these sessions, which were open to the public and advertised in the local media, Task Force members became familiar with the Wild and Scenic Rivers Act and continued to define issues to be addressed in the EIS. After the comments on the DEIS were analyzed, the task force met again throughout the winter of 1990-91 to help develop a preferred alternative.

MAILINGS

A list of approximately 175 people, agencies and groups was maintained to be sure other interests were kept informed of the planning process.

These parties were mailed copies of Task Force meeting minutes, announcements of future Task Force meetings, and newsletters. Newsletters were also mailed to approximately 1,600 people, including all those owning land in the lower White Salmon River corridor (as well as landowners along the upper White Salmon and the entire Klickitat River), other interested parties and Task Force members.

DRAFT EIS

An initial mailing of the Draft EIS was sent to the Task Force, 27 federal agencies, and about 500 other agencies, individuals and groups. A number of meetings were held with small groups after the Draft EIS was issued, and a public meeting was held in White Salmon, WA to solicit comments on the Draft. Written comments were received from 137 individuals, agencies, and groups (see Appendix D for information about the comments which were received, who the commenters are, and the Forest Service responses to those comments).

RESOURCE EVALUATION

The second step of the planning process involved collecting data on river resources and identifying the "outstandingly remarkable" values. This work was conducted by a consulting firm with input from the Task Force, the Forest Service, and other concerned parties.

Based on this assessment, resident fisheries, whitewater recreation, hydrology and geology of the canyon, and significant American Indian sites were determined to be outstandingly remarkable resource values on the lower White Salmon River (Land & Water Associates, 1989). The Wild and Scenic Rivers Act requires that river-related values determined to be outstandingly remarkable be protected and enhanced. Other values within the Wild and Scenic River boundary will receive varying degrees of protection.

ISSUES

MANAGEMENT THEMES

Four management themes, or general statements of objectives, were identified during the early stages of the planning process. These themes were used to help describe the following issues to be addressed:

- To maintain and enhance the economic viability of existing resource uses and develop a management plan that respects private property rights;
- To conserve and enhance instream biological and physical resources such as fish and their habitats, water quantity and water quality;
- To provide for appropriate recreational use and public access; and
- To conserve and enhance land-based biological and physical resources such as plants, animals, canyon ecology and diversity of species, historical and archaeological resources, and scenic quality.

BOUNDARIES

The Wild and Scenic River Act requires the managing agency to establish boundaries for designated rivers. Boundaries must be drawn so that the values for which the river was designated are protected. After designation, the Forest Service worked with interested groups to establish a boundary for the White Salmon River. The various interest groups disagreed as to where the boundaries should be; some wanted them narrow, while others supported much wider boundaries. The Forest Service published final boundaries in December 1987, and several administrative appeals were filed.

To resolve the appeals, a negotiation process was initiated by the Forest Service and an agreement was reached by the appellants. The Forest Service again published final boundaries and two new appeals were filed. These appeals were resolved through the administrative appeal process: the reviewing officer (Regional Forester) upheld the decision but directed the manager of

the National Scenic Area to reassess the boundaries during the management planning process. The final boundary determination has been the subject of much discussion and negotiation, and remains an area on which there is not total agreement.

ADMINISTRATION

Although the CRGNSA Act gave the Forest Service responsibility to develop a management plan for administering use of the river, some interest groups prefer another form of administration. Some prefer to see control of the river maintained at a local level, either through county or state government, with minimal federal presence, while others think the National Park Service should administer use of the river.

LAND ACQUISITION

At the time of designation, the lower White Salmon River corridor was entirely within private land ownership. The acquisition of private land by the federal government was a concern expressed at public meetings and throughout the planning process. Landowners are concerned about losing rights without compensation if stronger county zoning ordinances are instituted, or being forced to sell their property through federal condemnation. Various options, including zoning ordinances, fee title purchase and the purchase of scenic easements have been discussed throughout the planning process.

INSTREAM RESOURCES

People appreciate the year-round sustained flows of this glacial and spring-fed stream, the scenic stream character, its uses for agriculture and recreation. Water quantity and quality are viewed as important. Some members of the public raised concerns about the effects of agricultural practices, such as the application of pesticides, on water quality. Questions were also raised about the effects of septic systems on water quality.

Resident fisheries are valued by those living in the area and those who travel to fish here. Some people fear that with increased public access and publicity, this outstanding resource will

suffer directly from increased fishing pressure and indirectly from other recreational activities.

Reintroduction of anadromous fish is another issue. There are people who support and those who oppose this action. While many are in favor of reintroduction, others argue that such action will have substantial impacts on the resident fishery and whitewater recreation (both outstandingly remarkable resource values). Increased fishing and visitor use may also affect private property. It is not within the jurisdiction of the Forest Service to determine if reintroduction is appropriate. The sub-basin planning process and Federal Energy Regulatory Commission (FERC) relicensing process for Condit Dam will address this issue. The Forest Service will provide input into that environmental analysis.

BIOLOGICAL DIVERSITY

Protection of ecosystems, threatened and endangered species, and biological diversity are also issues related to management of upland resources. Protection of Oregon white oak ecosystems, in particular, has been a concern. Representatives of the Washington Department of Wildlife, Washington Natural Heritage Program, Yakima Indian Nation, Washington Environmental Council, Friends of the White Salmon and the Forest Service have cooperated to compile existing data and identify future information needs and management options for Oregon white oak communities.

Many people and groups who commented on the Draft EIS think that the diversity of plant and animal communities in the White Salmon River valley should be determined to be one of the OR values for which the river was designated.

CULTURAL RESOURCES

Cultural resources are a concern because of the presence of a traditional burial ground, as well as the site of a historic longhouse for the River People. Some people want to see this area developed for interpretative opportunities. American Indian representatives have expressed opposition to the idea of recreational use of the

area; their primary interest is in maintaining traditional cultural practices at the site.

American Indian treaty rights are also an issue. The members of four tribal governments reserved rights in the treaties of 1855 for fishing at "usual and accustomed" fishing sites on the Columbia River and its tributaries, including the White Salmon River. Specific sites are recognized for their traditional spiritual significance and existing practices. Many consider the entire White Salmon River valley an important area for continuing traditional practices, such as gathering foods, medicinal plants and materials for basket-making.

RECREATION

Boaters are concerned that certain qualities of their recreational experience will be negatively affected by increasing popularity of the river and increasing development pressures within the corridor. During the planning process, many said they would like to "keep the river as it is; keep it natural." While they wish to retain these qualities, they are concerned about regulations that may limit their boating opportunities.

Between the Draft and the Final, considerable concern was expressed about whether or not there is a need to limit use on the White Salmon River by implementing a permit system on the river. In addition, there was concern about limits on the number of commercial guides who operate on the river.

There is also a concern about public access to the river. The amount of privately owned land within the corridor currently limits access. In the past, boaters have been required to pay to get on the river, and again to get off. Currently, many pay a fee to a privately owned cable launch operator at BZ Corner. Others launch at Husum, either from recently purchased national forest land around the falls, or from private land where a fee has been charged in the past.

Landowners are concerned about river users who may disregard private property and trespass, causing impacts such as litter and wildfire, and forcing landowners to assume an enforcement

role. Landowners also expressed concern that current methods for reporting incidents of trespass are unclear and/or ineffective.

Safety is another concern shared by boaters, landowners, and the volunteer emergency response team. Many feel that a safety program is essential in order to ensure that recreationists are informed, have proper equipment, and that emergency response time is improved.

Whitewater boating is currently the primary recreation activity on the lower White Salmon River. Some people think that additional recreation opportunities should be provided. Suggestions include: opportunities for hiking, nature study, cultural resource interpretation, picnicking, camping, bicycling, horseback riding and fishing.

UPLAND RESOURCES

Residents, visitors, and recreationists, alike, appreciate the natural character and scenery of the river corridor. Many are concerned that commercial and residential development will replace the current mix of forestry, agriculture, and the natural landscape of the area.

Many residents of the river valley want to maintain their resource-based lifestyle. While they prefer to keep the area "as it is," they are faced with increasing development pressures, rising property taxes and land costs, and increasing regulations to restrict established land uses.

Landowners are concerned that they will lose their rights to manage their land as they see fit. Timber interests are concerned that their ability to realize a profit will be negatively impacted by Wild and Scenic River management. Other landowners are concerned that river protection will impact traditional practices such as grazing, agriculture uses, and construction of roads and bridges. Private landowners question whether federal designation will result in increased popularity of the area's recreation resources and increased incidents of trespass, litter and fire on their property. Other concerns include the effects of management on zoning, subdivision, and value of private land.

THE ALTERNATIVES

In considering the following alternatives, it is important to remember that the federal government does not have authority from the Wild and Scenic Rivers Act to zone private land. Therefore, provisions in the alternatives that do not apply to local or state laws and regulations can be accomplished by the federal government only by acquisition in fee title or through the purchase of scenic and conservation easements. In those cases, landowners would receive fair market value for the property or rights. There are limits on the amount of land the federal government can acquire under the Wild and Scenic Rivers Acts, and any acquisition is contingent upon appropriations from Congress.

ALTERNATIVE 1

With Alternative 1, the lower White Salmon River would continue to be managed under existing local, state and federal laws - the requirements specified in the Wild and Scenic Rivers Act would not be implemented. This alternative is displayed to meet the requirements of the National Environmental Policy Act Regulations to include the alternative of "no action."

ALTERNATIVE 2

The goal of Alternative 2 is to increase the natural character of the river corridor within as large a boundary as the Wild and Scenic Rivers Act allows.

Actions would be taken to increase water quality and instream flows. No new water intake structures could be built and existing ones would be removed or their intrusiveness reduced.

A high level of biological diversity would be restored and maintained. Only natural ecological processes would be allowed to take place in areas such as old-growth communities, Oregon white oak communities, wildlife travel corridors, riparian habitat, etc.

Cultural resources would be inventoried and evaluated throughout the White Salmon River valley. All sites within the boundary would be protected and a comprehensive interpretative plan would be developed.

The recreation experience would be managed to maintain low levels of perceived crowding, and high levels of naturalness. A permit system to limit use at 1988 levels would be implemented for both commercial and private boaters. No recreation facilities would be provided other than adequate parking and sanitation at the put-ins and take-outs.

A 400-foot wide buffer of natural vegetation would be created on each side of the river within which no new residential, commercial, agricultural, or forestry development could occur. In addition, lands within the buffer that are presently utilized for agricultural and some other uses would be converted to forest lands.

Outside the buffer, up to 50% of the existing agricultural acreage would be converted to forest, and no new residential or commercial uses would be allowed except in the rural centers of Husum and BZ Corner. Klickitat County would be encouraged to limit the potential overall size of the two rural centers, and substantially reduce the density of development.

ALTERNATIVE 3

The goal is to maintain the current character of the river area within the boundaries currently established.

Actions would be taken to increase water quality, while instream flows would be maintained at current levels. No new water intake structures would be built, and existing ones would be removed or their intrusiveness reduced.

The current level of biological diversity would be maintained partially by preventing timber harvest in the buffer and in areas such as old-growth communities, riparian habitat, and wetlands. Active management, including limited timber harvest, would be aimed at perpetuating Oregon

white oak as a significant component in timber stands and enhancing winter range for black-tailed deer.

Cultural resources would be inventoried only within the river boundary and on a voluntary basis on private lands. Higher priority sites would be considered for protection through acquisition, and interpretation would be focused on specific properties.

The recreation experience would be managed to maintain low to moderate levels of perceived crowding, and moderate to high levels of naturalness. Adequate parking and sanitation, plus small picnic grounds would be provided at the put-ins and take-outs. A few short trails and a longer trail which provides access to a number of different plant communities would be provided. There would be a bicycle trail along Highway 141 between Husum and BZ Corner.

A 200-foot wide buffer would be established on each side of the river with no new residential, commercial, agricultural, or forestry development. Existing agricultural uses could continue. Outside the buffer, the existing proportions of agricultural and forest acreage would be maintained.

Outside the rural centers, new residential uses would be very low, clustered on the least critical 5% of the land. Klickitat County would be encouraged to limit the potential size of the two rural centers, and substantially reduce the density of development.

ALTERNATIVE 4

The goal of Alternative 4 is to minimize effects on private landowners by establishing narrow boundaries, while providing at least minimum levels of protection and enhancement of important river values.

Water quality would be monitored and a non-degradation goal would be achieved through cooperative efforts with the Washington Department of Ecology. New water intake structures

could be built if they do not adversely affect river values.

Rare and significant plant communities within the boundary would be maintained by preventing timber harvest in the buffer and in canyon ecosystems, riparian habitat, and wetlands.

Cultural resources would be managed as in Alternative 3, except that an oral history would not be completed and sites would only be acquired if necessary to protect them from imminent threats. Only significant sites would be interpreted.

The recreation experience would be managed to maintain moderate levels of perceived crowding and naturalness. Adequate parking and sanitation, and small picnic grounds would be provided at the put-ins and take-outs. Two small picnic/rest stops, accessible only from the river, would be provided, one above and one below Husum. Only a few short trails would be provided.

A 100-foot wide buffer would be created on each side of the river within which no new residential, commercial, agricultural, or forestry development would be allowed. Existing agricultural uses would be allowed to continue. Outside the buffer, up to 25% of the existing forest acreage could be converted to agricultural uses.

Outside the rural centers, new residential uses would be allowed at a moderately low density, but they would be spread out along the buffer. Klickitat County would be encouraged to limit the potential overall size of the two rural centers and reduce the density of development.

ALTERNATIVE 5

The goal of Alternative 5 is to minimize effects on private landowners by establishing narrow boundaries, while providing at least minimum levels of protection and enhancement of important river values and substantially increasing recreation opportunities.

Water quality would be monitored and a non-degradation goal would be achieved through cooperation with the Washington Department of

Ecology. New water intake structures could be built if they do not adversely affect river values.

Timber harvest would not occur in the buffer, nor in canyon ecosystems, riparian habitat, or wetlands.

Cultural resource surveys would occur only in response to development proposals and acquisitions, and interpretation would be to support recreation management needs.

The recreation experience would be managed to allow moderate to high levels of perceived crowding and moderate to low levels of naturalness. Substantial recreation development would take place, including large picnic grounds at the put-ins and take-outs, two small picnic/rest stops accessible from the river and the road, and a public campground accessible from the river and the road. An extensive trail system would be provided.

A variable width buffer (50-150 feet wide) would be established on each side of the river based on topographic breaks and screening vegetation. Within the buffer, no new residential, commercial, agricultural, or forestry development would occur. Existing agricultural uses could continue.

Outside the buffer, up to 25% of the existing forest acreage could be converted to agricultural uses. Beyond the rural centers, new residential uses would occur at a moderate density, and they would be clustered. Klickitat County would be encouraged to limit the potential overall size of the two rural centers and reduce the density of development.

ALTERNATIVE 6

Alternative 6 is the "Preferred Alternative." The goal of Alternative 6 is to maintain the current character of the river area and provide long-term protection and enhancement of its outstandingly remarkable values. Boundaries are very similar to the boundaries currently established, with some minor additions and deletions. A key aspect of Alternative 6 is a tentative agreement with SDS Lumber Company for the Forest Service to acquire all SDS lands within the boundary

through exchange - almost 40% of the land within the boundary.

Through cooperation with Washington State Department of Ecology, instream flows would be maintained at current levels and water quality would either not be degraded, or, if necessary, improved through a technical assistance program. Non-intrusive water intake structures could be built, and owners would be encouraged to reduce the adverse impacts of existing ones.

The current level of biological diversity would be maintained or enhanced within the boundary primarily by managing the lands acquired from SDS and the buffers to protect specifically identified plant communities, perpetuating existing stands of Oregon white oak, and increasing the amount of vegetative communities which are in late successional stages. Studies would be done to determine whether biological diversity is an outstandingly remarkable value.

A comprehensive oral history and archival inventory would be compiled of all cultural resource sites within the entire White Salmon River valley. On-the-ground surveys would be performed on all public lands within the boundary, and on private land with a high probability of having significant sites. Significant sites would be protected through acquisition, if necessary.

The recreation experience would be managed to maintain low to moderate perceptions of crowding and moderate to high levels of naturalness and isolation along the river. If use limits become necessary, each person who wants to boat the river, whether commercially or as a private

boater, would have an equal opportunity to do so. A permit system would not be established unless non-permit methods for managing use are unsuccessful in practice.

Adequate parking, sanitation, and picnic facilities would be provided at the put-ins and take-outs. Two boat-in picnic sites, a couple of interpretive trails which do not provide access to the river, and a bicycle trail along Highway 141 would be developed.

A 200-foot wide buffer would be established on each side of the river, except in Husum, where the buffer would be 100-feet wide. Existing uses within the buffer could continue, but no new residential or commercial development, or new agricultural or forestry activities could take place.

Outside BZ Corner, Husum, the buffer, and federal land, agricultural and forestry uses could take place according to state and county regulations. New housing development would be low and clustered on the least productive 5% of the land. In BZ Corner and Husum, residential and commercial development could be about half what is allowed under current county zoning.

ENVIRONMENTAL CONSEQUENCES

A detailed explanation of the estimated effects of the various alternatives are displayed in Chapter IV. A summary of these effects follows in Figure S-1:

Figure S-1: SUMMARY OF EFFECTS

	ALTERNATIVE 1	ALTERNATIVE 2
MANAGEMENT THEME	Manage Under Existing County and State Laws Only (NEPA no action alternative).	Enhance all W&S River Values and Increase Natural Character of Area
WATER QUALITY	Decrease in quality from increased development and recreational use.	Minor short-term improvement in quality. Risk of long-term decrease from activities outside river boundaries.
QUANTITY - Low Flows	Long-term decrease in quantity.	Minor increase.
RESIDENT FISH	Population maintained in short run, but suffers severe impacts in long term from uncontrolled recreation use.	Population is significantly reduced unless special harvest regulations implemented.
BIOLOGICAL DIVERSITY	Acreage of mature and old-growth conifer and oak forest significantly reduced; negative effects on some wildlife species. Biological diversity reduced.	Best alternative for enhancement of biodiversity by increasing proportion of late successional old-growth plant and animal communities.
CULTURAL RESOURCES	Significant risk of losing knowledge or material and of vandalism to sites. Opportunities for documenting oral history are lost. No opportunity to compensate landowners to protect sites under existing state and federal laws.	Comprehensive inventory and data base completed permitting development of cultural resource management and monitoring plans. Interpretation of cultural systems rather than individual sites. Compensation available to landowners to protect sites.
RECREATION	Decrease in naturalness reduces quality of experience. Sharp increase in white water boating reduces opportunity for solitude, but large number of people can experience river. No guaranteed public access.	Natural appearance of river is enhanced providing high quality experience, but fewer people can experience. Public access is assured. Few new recreation experiences provided.
LANDSCAPE CHARACTER	Significant long-term change due to residential development. Residences become dominant as seen from highway 141. Reduction in forested area. More residences and development seen from river.	Most natural appearing landscape as viewed from the highway and river. Significant change to area outside river boundary from development.
LAND USES	Little change in short term, but significant reduction in area managed over long term due to residential development and conversion to agriculture uses.	Greatest reduction in acres available for timber production. (1,073 acres).
FORESTRY		
AGRICULTURE	Slight reduction in short term but significant reduction in long term because of residential development	Greatest direct reduction in agriculture; some fields and about half of orchards converted to forests; grazing heavily restricted.
RESIDENTIAL/COMMERCIAL	Dramatic increases in residential and commercial development, potential for up to 329 new residences outside of rural centers and up to 2,864 in Husum and 672 in BZ Corner.	Severely restricts new residential and commercial development. No new development outside of rural centers. Limited new development in rural centers.
SOCIAL/ECONOMIC	Slight direct effect on forest and agricultural jobs. Increased economic growth in recreation related activities. Highest level of conflicts between landowners and recreationists. Long-term significant changes in jobs and lifestyles.	Largest direct reduction in agricultural and forest related jobs. Lowest level of landowner/recreationist conflicts. Moderate effects on present lifestyles of residents.

Figure S-1: SUMMARY OF EFFECTS (continued)

	ALTERNATIVE 3	ALTERNATIVE 4
MANAGEMENT THEME	Maintain Current Character of the River Area	Minimize Effects on Landowners while Focusing Protection on Outstandingly Remarkable (OR) Values
WATER QUALITY	Maintenance of present condition in short term, with risk of degradation in long term from activities outside boundaries.	Little change in present water quality, with potential decrease in the long term.
QUANTITY - Low Flows	No change	minor decrease
RESIDENT FISH	Same as Alternative 2.	Slight negative effects in the short term and moderate effects in long term without special harvest regulation.
BIOLOGICAL DIVERSITY	Generally maintains the current level of biodiversity. Some enhancement of oak communities and associated wildlife species.	Potential for some loss of biodiversity by increasing early successional stages and associated wildlife.
CULTURAL RESOURCES	Comprehensive inventory and data base developed as in Alt. 2 but less area covered. Only sensitive sites are monitored and some opportunities for protection and interpretation are lost as compared with Alt. 2.	Piecemeal inventory permits less protection than in Alts. 2 and 3. Less is learned about the area and there is a greater risk of loss or damage to some sites.
RECREATION	River corridor remains natural, enhancing experience. Slight increase in visitor use causes less opportunity for solitude. Public access to river assured and new recreation opportunities (trails) provided.	Somewhat less natural character changes experience somewhat. Moderate increase in use causes less opportunity for solitude. Public access assured.
LANDSCAPE CHARACTER	Rural, pastoral character is maintained within boundary but significant changes outside. The view from the river is maintained or enhanced. Significant changes in rural centers.	Significant reduction in naturalness as viewed from highway, small reduction as seen from river, caused by increase in residential development.
LAND USES	Moderate reduction in land available for timber production (550 acres). Remaining acres have varying restrictions.	Least effect except for Alt. 1. About 200 acres removed from timber production.
FORESTRY		
AGRICULTURE	Minimal impacts to existing agricultural uses.	Little effect because of narrow boundary.
RESIDENTIAL/COMMERCIAL	Provides for slight increase in residences outside of rural centers and moderate development within rural centers.	Allows greatest number of houses except for Alt. 1.
SOCIAL/ECONOMIC	Minimal reduction in agriculture and slight reduction in forest management related jobs. Minor effects on lifestyles of residents.	Minimal direct effect on agricultural and forest related jobs. Positive economic effect from river recreation. Potential slight increase in user/landowner conflicts. Minor effects on lifestyles.

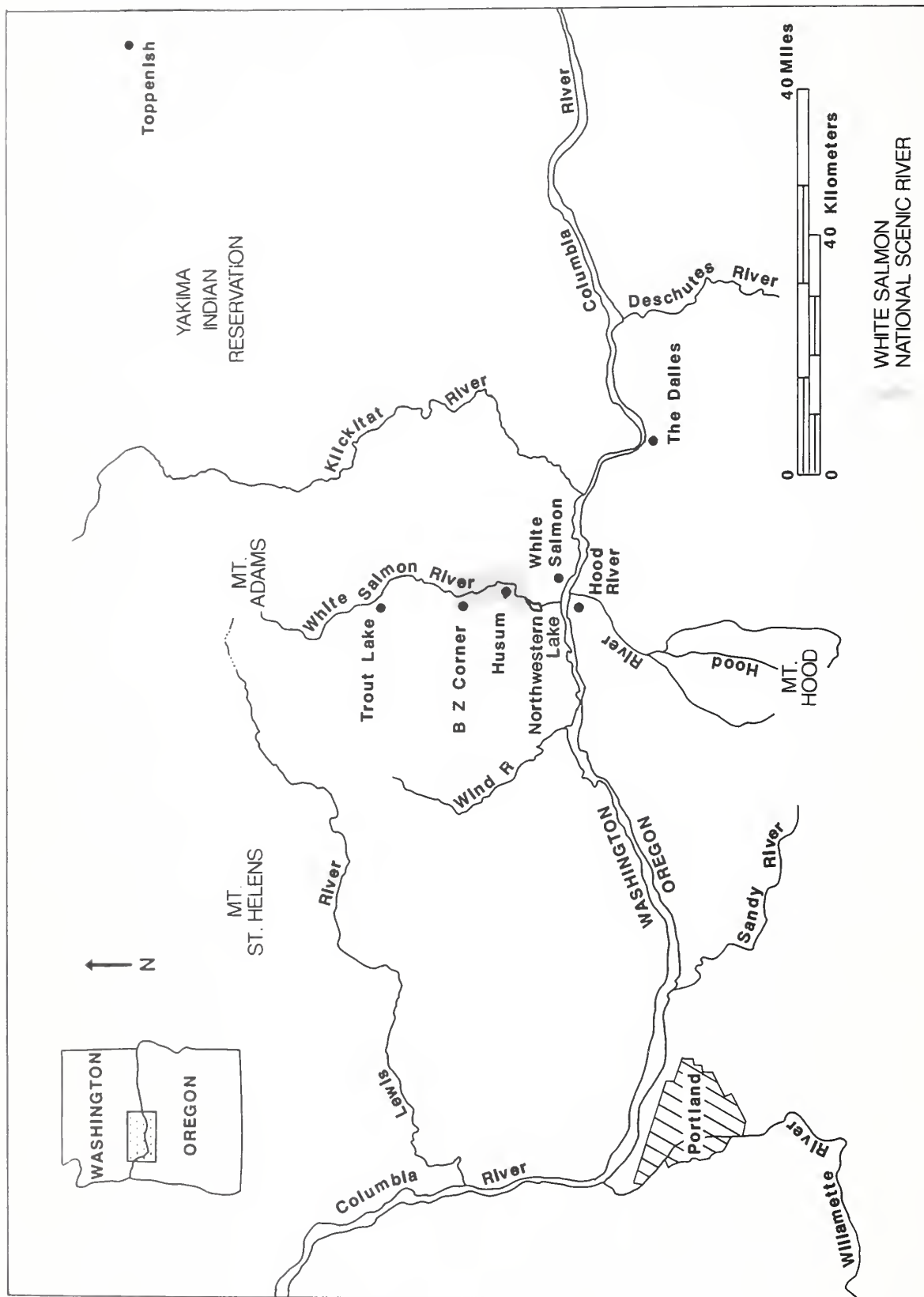
Figure S-1: SUMMARY OF EFFECTS (continued)

	ALTERNATIVE 5	ALTERNATIVE 6
MANAGEMENT THEME	Same as Alt. 4, and Provide for a High Level of Recreation Use.	Maintain current character of river area. Protect OR values without undue limits on private land.
WATER QUALITY	Risk of short- and long-term water quality degradation from development outside the boundary and increased recreation use.	Little change in present water quality, with potential decrease over long term from activities outside boundary.
QUANTITY - Low Flows	Minor decrease	No change
RESIDENT FISH	Greatest negative impact to fish population resulting in the need to drastically restrict fishing.	Slight decrease in fish population in short and long term.
BIOLOGICAL DIVERSITY	Similar to Alt. 4 but greater risk of disturbance to some wildlife because of increased recreation development and use.	Similar to Alternative 3 but greater benefits due to greater federal ownership and emphasis on protecting biodiversity.
CULTURAL RESOURCES	Provides less protection than Alts. 2, 3, and 4. Increased risk of damage or loss to cultural properties and interpretive opportunities severely limited.	Effects would be between Alts. 2 and 3. More likely to inventory and discover cultural sites on private land. Good opportunity for off-site interpretation.
RECREATION	High level of public access and recreation, potential for increased conflicts with private landowners and visitors, highest level of white water boating use and less opportunity for solitude.	Similar to Alt. 3 except equal opportunities for private and commercial boaters. Limited number of commercial guides. Greatest amount of federal land for dispersed recreation.
LANDSCAPE CHARACTER	Overall effect similar to Alt. 4, but view from river is better protected. Views around Husum change because of increase in development.	Overall similar to Alt. 3, but potentially has greatest number of residences within boundary (particularly in rural centers) except for Alt. 1.
LAND USES FORESTRY	Similar to Alt. 4 but more area affected, about 450 acres removed from timber production.	Similar to Alt. 2 - 1,040 acres removed from timber production.
AGRICULTURE	Minimal effect on agricultural uses.	Minimal impacts to existing agricultural uses.
RESIDENTIAL/COMMERCIAL	Similar to Alternative 4.	Similar to Alternative 3.
SOCIAL/ECONOMIC	Minimal direct effect on forest and agricultural related jobs. Positive economic effect from recreation. Potential increase in user/landowner conflicts.	Similar to Alternative 3.



CHAPTER I

PURPOSE AND NEED FOR ACTION



White Salmon National Scenic River and Vicinity

CHAPTER I

PURPOSE AND NEED FOR ACTION

INTRODUCTION

The purpose of this document is to provide a basis for comparing management alternatives and selecting a management plan for the 7.7-mile section of the White Salmon River (RM 5-12.7), located above Condit Dam and Northwestern Lake, in Klickitat County, Washington. This segment of the river was added to the National Wild and Scenic Rivers system through the Columbia River Gorge National Scenic Area (CRGNSA) Act of 1986 (16 USC 544). The Act specifies that the river will be administered by the Secretary of Agriculture (U.S. Forest Service).

Neither an eligibility nor a suitability study was performed prior to designation. The lower White Salmon was classified as "Scenic," based on its free-flowing character, largely undeveloped shorelines, and limited degree of road access. Section 3 of the Wild and Scenic Rivers Act (16 USC 1274, as amended) specifies that a comprehensive management plan will be developed for the river. It was determined that the plan should be completed by October, 1990, and that it would be documented according to guidelines established by the National Environmental Policy Act (NEPA).

This Final Environmental Impact Statement (EIS) presents six management alternatives, including a preferred alternative. It also includes a description of the affected environment as well as the probable environmental effects which would result from implementing the alternatives.

This document is presented in four chapters:

- Chapter I, Purpose and Need for Action, introduces Wild and Scenic River legislation, the National Environmental Policy Act, and the issues involved in developing a

management plan for the lower White Salmon River.

- Chapter II, The Alternatives, presents and compares the management alternatives, with information on how they would be implemented with measures to protect the environment, and discusses alternatives that were considered, but eliminated from further analysis.
- Chapter III, Affected Environment, describes the physical, biological and socioeconomic characteristics of the lower White Salmon River corridor.
- Chapter IV, Environmental Consequences, describes the likely effects of each alternative on the resources described in Chapter III.

CHANGES BETWEEN THE DRAFT EIS AND FINAL EIS

Changes made in Chapter I are primarily related to the planning process between issuance of the Draft EIS and this Final EIS, and the refinement of several of the issues which resulted from the public comments and the discussions with the Task Force.

The chapter has been updated to describe distribution of the Draft EIS, the public involvement which took place subsequent to its distribution (with emphasis on the analysis of comments and Forest Service responses), and the work of the Task Force in leading to the Preferred Alternative.

As a result of the comments on the Draft EIS and discussions with the Task Force, the following additions relating to the issues were made:

- Criteria used in determining outstandingly remarkable (OR) values.
- A lengthy discussion dealing with biological diversity as an OR value.
- A discussion dealing with Oregon white oak as an OR value.
- A brief description of the disagreement over the final boundary location.
- A brief description of the concerns about whitewater use limits, a permit system for limiting use, and limits on the number of commercial guides.

WILD AND SCENIC RIVERS ACT

The Wild and Scenic Rivers Act was passed in 1968 to balance river development with river protection:

Congress declares that the established national policy of dam and other construction...needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.

To accomplish this goal, Congress created the National Wild and Scenic Rivers System:

It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and...shall be protected for the benefit and enjoyment of present and future generations.

The Wild and Scenic Rivers Act specifies that designated rivers be classified as "Wild," "Scenic," or "Recreational," based on the level and type of development along the river and within ¼ mile of either bank. The Act defines the characteristics of each as follows:

Wild river areas are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

Scenic river areas are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Recreational river areas are readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past.

By the end of 1988, about 9,200 miles of 119 rivers had been added to the Wild and Scenic Rivers System (Coyle, 1988). Designation into the Wild and Scenic Rivers System means that the river corridor, which generally includes the land up to about ¼ mile on either side of the river, is managed in a manner that will protect and enhance the values for which the river was designated, without limiting other uses that do not substantially interfere with public use and enjoyment of these values. Federal water projects, including dams, are specifically prohibited, but existing resource uses, including residential and commercial uses, timber harvest, agriculture, grazing and recreation may continue as long as they do not degrade river resources. The overall objective is to maintain the character of the river and its immediate environment and to protect and enhance specific resource values. New resource uses may be allowed, but they must be evaluated for their compatibility with the purposes of the Wild and Scenic Rivers Act (See Section IV of Appendix E, The Management Plan).

THE PLANNING PROCESS

The lower White Salmon River planning process is one of four studies being made on the White Salmon and Klickitat Rivers. The 1986 CRGNSA Act mandated that studies be undertaken to determine if the upper sections of both the

Klickitat and White Salmon Rivers should be included in the Wild and Scenic Rivers System, and by designating the lower sections of both rivers into that system, required the development of management plans for each. The Forest Service contracted with Land and Water Associates, a natural resource consulting firm, to conduct eligibility and suitability studies of the upper segments of both rivers and to develop a management plan for the lower Klickitat. The lower White Salmon EIS and management plan have been completed by a Forest Service planning team. The planning process involved six steps:

1. **Project Scoping/Public Involvement:** public meetings to identify issues, concerns, and objectives; organize a citizen's Task Force; develop mailing lists of other interested parties
2. **Resource Evaluation:** identify and evaluate river resources; determine outstandingly remarkable resource values
3. **Identification of Management Alternatives:** clarify issues, evaluate existing river management practices, identify a range of potential management actions, and evaluate the feasibility of alternative management scenarios
4. **Conduct an Environmental Analysis:** determine the consequences of management alternatives and evaluate the relative merits of alternatives
5. **Prepare a Draft EIS:** issue a draft environmental impact statement for public review and comment
6. **Select a Preferred Alternative and Develop a Management Plan:** identify a preferred alternative based on environmental analysis and comments received during the public review period; develop a management plan and implementation strategy; and prepare the Final EIS.

STEP 1: PROJECT SCOPING/PUBLIC INVOLVEMENT

The primary purpose of an EIS is to assure that all pertinent environmental information and analyses are available to citizens, public officials, and cooperating agencies before decisions are made and actions are taken. The National Environmental Policy Act (PL91-190) and accompanying federal guidelines and regulations (40CFR Parts 1500-1508 as of July 1, 1986) specify the required procedures for preparing environmental impact statements. These include holding one or more scoping meetings early in the planning process so citizens have the opportunity to express concerns and issues important to them.

All of the land within the White Salmon River corridor was in private ownership at the time of designation. An extensive public involvement program was developed during the planning effort to ensure that the process addressed the concerns of landowners, local residents, the Yakima Indian Nation, Klickitat County, the State of Washington, and others having a stake in how the river is managed. The public involvement program included public meetings, a citizens' Task Force, newsletters and mailings to interested parties, as well as ongoing information meetings with any party requesting them.

Public Meetings.

In October 1987, public meetings were held in Lyle, Trout Lake, and White Salmon, in order to involve interested parties early in the planning process. During the meetings, information on the planning process was presented, and participants were invited to ask questions and express their concerns. Input from these meetings and information gleaned from letters and conversations with other concerned individuals and organizations were compiled and analyzed. Some of the concerns expressed included: boundaries, designation, classification, contracts, jobs, funding, future agency for river management, interim management, management plan timelines, Shoreline Management Act, identification of OR resource values and other special resources, such as timber, fish, wildlife, scenery and cultural resources; economics, taxes, incentives, land prices, acquisition, easements, condemnation, lifestyle, private rights and grandfathering,

vandalism and trespass, and recreation and tourism. Another scoping meeting was held on November 9, 1988, to gather input from the public specifically on the lower White Salmon planning project.

Task Force.

To ensure that diverse viewpoints were considered throughout the planning process, a broad-based public Task Force was created. The Task Force is comprised of 24 representatives and alternates from a wide range of interests concerned about the future of the river: residents, farmers, and ranchers along the White Salmon and Klickitat rivers; Yakima Indian Nation and River People, USDA Forest Service (Mt. Adams Ranger District), Washington Department of Wildlife, Washington Department of Fisheries, Klickitat County, private river floaters and anglers, commercial outfitters, Pacific Power and Light Company, Mt. Adams Orchards, Friends of the Columbia Gorge, SDS and Champion International timber companies, Friends of the White Salmon, and the Washington Environmental Council.

The Task Force members helped identify issues, determine the significance of river resources, develop and refine management alternatives, and kept their fellow interest group members informed about the planning process. The combined Task Force (for both the Klickitat and White Salmon Rivers) first met on March 16, 1989, and continued meeting a minimum of once a month until June. During these sessions, which were open to the public and were advertised in the local media, group members became familiar with the Wild and Scenic Rivers Act and continued to refine issues to be addressed in the EIS. Four "management themes," or general statements of objectives, were developed during these meetings. They were:

- To maintain and enhance the economic viability of existing resource uses and develop a management plan that respects private property rights.
- To conserve and enhance instream biological and physical resources, such as resident

and anadromous fish and their habitats, water quantity and water quality.

- To provide for appropriate recreational use and public access.
- To conserve and enhance land-based biological and physical resources, such as plants, animals, canyon ecology and diversity of species, historical and archaeological resources, and scenic quality.

At this stage in the planning process (June 1989), the Task Force split into three subgroups: one for the Klickitat River, one for the upper White Salmon River, and one for the lower White Salmon River. Between June and November 1989, these subgroups held meetings at least once a month. During these meetings, the lower White Salmon subgroup addressed each of the management themes in detail. In order to carefully consider the issues raised during the scoping and Task Force meetings, the management themes were broken down into specific categories or issues. A detailed description of the issues is presented in the "Issues" section of this chapter.

After the comments on the Draft EIS were received and analyzed, the Task Force became active again and met throughout the winter of 1990-1991 to discuss a preferred alternative. These discussions sharpened the understanding of many of the issues, and by the middle of March, although they did not fully agree on all details, the members of the Task Force had achieved consensus on most of the issues.

Mailings to Interested Parties.

A list of approximately 175 people, agencies and groups was compiled to make sure that other interests were kept informed of the planning process. Interested parties were mailed copies of Task Force meeting minutes, announcements of future Task Force meetings, and newsletters. Newsletters were also mailed to approximately 1,600 people, including all those owning land in the lower White Salmon River corridor (as well as landowners along the upper White Salmon and the entire Klickitat River), other interested parties and Task Force members.

The Draft EIS

The distribution of the Draft EIS for review and comment was the major formal process for receiving input into the planning process from government and private sources. In July 1990, an initial mailing of the Draft EIS was sent to the Task Force, 27 federal agencies, and about 500 other agencies, individuals, and groups. The comment period was open until September 17, 1990. A number of meetings were held with small groups after the Draft EIS was distributed, and a public meeting was held early in September in White Salmon to solicit comments on the draft. Written comments were received from 137 individuals, agencies, and groups. Those comments were analyzed and consolidated, shared with the Task Force prior to their discussions about the preferred alternative, and responded to by the Forest Service (see Appendix D for information about the comments which were received, a list of the commenters, and the Forest Service responses to the comments).

STEP 2: RESOURCE EVALUATION

The second step of the planning process involved collecting data on river resources and identifying the "outstandingly remarkable" values. This work was conducted by Land and Water Associates, with input from the Task Force, the Forest Service, and other concerned parties and agencies.

Outstandingly Remarkable Resource Values on the Lower White Salmon River

The Wild and Scenic Rivers Act and federal guidelines (Federal Register Vol. 47, pp. 39454-39461) specify that in order to be eligible for addition to the system, a river segment must be free-flowing and possess one or more "outstandingly remarkable values," such as scenic, recreational, geologic, fish, wildlife, historic, ecologic, or cultural resources.

In many cases, an eligibility study is undertaken before a river is recommended for inclusion in the Wild and Scenic Rivers System. Because the lower White Salmon was "instantly" designated a National Scenic River, outstandingly remark-

able resource values had not been identified at the time of designation.

Eight major resource categories were analyzed, including: geology, hydrology, recreation, resident and anadromous fish, scenic quality, vegetation, wildlife and cultural resources. These resource values were then studied in greater detail by comparing them to similar features of other rivers in the region (Land & Water Associates, 1989).

The region selected for comparative analyses was the Columbia River Gorge area between the Cascade Mountains to the west and the Columbia Plateau to the east (see Fig. I-1). This included all major tributaries of the Columbia River spanning the crest of the Cascades, from the confluence of the Umatilla River in eastern Oregon, to the Sandy River, near Portland. A comparative analysis of resources by river segment was done.

In order to make a determination of OR value, two criteria are addressed:

1. The first is whether the value of concern is either
unique - rare in the area under study (the river and an area within about ¼ mile of it) compared with other rivers in the region, or
exemplary - an outstanding example among a number of other examples of the value occurring within the region.
2. The second criterion is whether the value of concern in the area under study is river-related in that it contributes substantially to the functioning of the river or owes its existence or location to the river.

Based on this assessment, resident fisheries, whitewater recreation, hydrology and geology of the canyon, and American Indian cultural sites were determined to be outstandingly remarkable resource values. In addition, other important resources, including plant species and wildlife habitat were identified.

Many comments on the DEIS identified additional resource values that people think meet the criteria

for outstandingly remarkable (OR) value. The following section identifies additional work and discussion which took place to determine if these other resources qualify as OR values.

Biological Diversity as an OR Value

Criterion 1 - During the early phases of the planning process, Land and Water Associates prepared **An Evaluation of the Biotic Resource Values of the White Salmon and Klickitat Rivers, (October 12, 1989)** as part of an overall process to determine OR values. The methodology used by Land and Water Associates was to review all the documented information known to exist on rare plants, vegetative communities, and wildlife habitat for river drainages within the region. They wrote, "Despite general agreement among authorities on the unique climatic and physiographic diversity of the area (particularly the White Salmon drainage) and expected implications for biotic diversity, very little documentation exists attesting to the fact. Two major problems are the paucity of corridor-specific knowledge and the lack of regional comparative information." They concluded that, "a comprehensive comparative analysis cannot be performed."

In response to the comments to the DEIS, further discussion with regional experts in botany, plant ecology, and wildlife biology took place to gather additional information as to the significance of biological diversity within the White Salmon River boundary. The experts spoke about the concept of biological diversity: species richness and composition, unique assemblage of the plants and animals, and relationship between wildlife, fish, and plant communities. Those familiar with the area emphasized the significance of the plant and animal communities within the Columbia Gorge and its major tributaries, with specific reference to the White Salmon, Klickitat, and Hood River drainages.

Specific points made to support this position included:

- The White Salmon River drainage has a rich diversity in the components that are important for biological diversity.

- The presence of plants endemic to the Columbia River Gorge occurring in the White Salmon watershed.
- The White Salmon River drainage's evenly proportioned display of plant communities specifically associated with the western Cascade Mountains and the Mid-Columbian Basin.
- The range of plant communities that are associated with the wide range of elevations and precipitation zones of the Columbia River Gorge are compressed within the White Salmon drainage which adds another dimension to the diversity of the plant assemblage.

These professionals recognized the presence of, or likely presence of, rich diversity in the White Salmon River drainage and indicated that this diversity is not likely to be found elsewhere nearby. Unfortunately, as Land and Water Associates found earlier, at present there are essentially no documented studies on this issue for this area and the other drainages in the region. Therefore, their general consensus was cautious, and many expressed the need for more detailed inventory data to arrive at a definitive assessment of the diversity present, rather than relying predominantly upon "professional judgment."

Criterion 2 - Riparian areas have long been recognized as important moderating factors, as supporting a disproportionately high degree of biological diversity, and as biological corridors. As a moderating factor, the White Salmon River is no exception in providing a cool environment in the summer and a relatively snow-free environment in the winter. The wind and water movement within a riparian area are important vehicles for intermixing of plant communities. Finally, riparian areas are often critical corridors in which wildlife migration is concentrated and which allow movement by wildlife between important neighboring habitats.

The extent of the riparian area is functionally different for plants and animals. The riparian vegetation (as a measure of the riparian area) along the White Salmon River will be very narrow in some areas where the river is confined by

cliffs and much broader in other areas where the underground water from the river may be available for plants several hundred yards from the river's edge. For wildlife, the riparian area is more difficult to define because animals tend to be far more mobile and will use a larger area associated with the river. For some animals, this may include several hundred yards on either side of the river, depending on cover, food, and security needs.

The presence of a riparian area will always be an essential component of the total biological diversity of the area in which it is located. The total diversity of an area containing a riparian area will always be much richer than it would be if it did not contain the riparian area. Moreover, it is the combination of the riparian and non-riparian components of diversity within the river corridor that contributes substantially to the functioning of the ecosystem of the whole river drainage. In that broad sense, the biological diversity of any area studied which contains a riparian area can be said to be river-related.

In a narrower sense, presently known biological diversity specific to the area within about ¼ mile of the White Salmon River includes components such as oak and oak/fir communities, rare and endemic plant species, endangered and sensitive wildlife, cliff and talus habitat, wetlands, and old-age conifer and oak communities. Only some of these components "owe their existence directly to the river," such as the occurrence of bald eagle, riparian vegetation, and some cliff and wetland habitats. Many of these components of biological diversity, such as oak and fir communities, are not directly river-related, because they occur in many different places other than along the river. The knowledge of the full extent of the biota, which owes its existence directly to the White Salmon River and the other rivers in the region, awaits further study.

Pulling together the latest information gathered from discussions with the biological experts clearly identifies biological diversity as a strong potential candidate for an OR value. However, due to the lack of comprehensive inventories and analysis, the conclusions reached at this

time are the same as the conclusions reached by Land and Water Associates in 1989. It is still not possible to do the comparative analysis which can result in a determination of whether biological diversity is or is not an outstandingly remarkable value.

Oregon White Oak as an OR Value

Criterion 1 - Oregon white oak communities are recognized as critical wildlife habitat in the State of Washington, as well as an important botanical community in the White Salmon River drainage. However, Oregon white oak is found throughout the east portion of the Columbia Gorge at low to mid elevations, along the White Salmon, Klickitat, and Hood River drainages, and south and west of The Dalles, OR. This oak species is also found in the Yakima Valley and in scattered locations along the east side of the Cascades in Washington state. In Oregon this species of oak is found south of The Dalles, but disappears as the plateau rises in elevation south of the White River. The oaks reappear further south in the Medford area and are found throughout the west side of the Cascades in Oregon and in scattered areas in Washington. Therefore, it can be seen that Oregon white oak is not unique to the White Salmon River drainage.

Criterion 2 - Oregon white oak is not river dependent and usually prefers the drier upland locations. Nor is its presence essential to the functioning of the White Salmon River. The Oregon white oak in the area under study is in the process of being crowded out by other faster-growing, taller conifer trees such as Douglas-fir. In fact, in order for white oak to remain an important component of the forest in this area, it is thought that manipulation of the conifers will be necessary. This could be through timber harvest, under-burning, etc., in order to remove the competition to the oaks.

After reviewing the information gathered in response to questions 1 and 2, the conclusion is that Oregon white oak does not meet the criteria for an "outstandingly remarkable" value.

STEP 3: IDENTIFICATION OF MANAGEMENT ALTERNATIVES

The Forest Service rivers planning team, with the Task Force, worked together to evaluate the existing management practices within the lower White Salmon corridor and to identify the range of potential management actions. The results of this effort were presented at a public meeting in White Salmon, on December 7, 1989. The objective of the public meeting was to determine if a full range of reasonable management alternatives was being considered. Public comments were received during the meeting and approximately 100 written comments were received afterwards. Additional modifications were made to the management alternatives based on this input. Those alternatives selected for analysis and those eliminated from further consideration are discussed in Chapter II.

STEP 4: CONDUCT AN ENVIRONMENTAL ANALYSIS

Next, the rivers planning team systematically analyzed the affected environment (Chapter III), and estimated the environmental consequences of the management alternatives being considered (Chapter IV). This analysis involved compiling information from resource specialists and estimating future conditions based on existing trends.

STEP 5: PREPARE A DRAFT EIS

The Draft EIS presented five alternatives for managing the lower White Salmon River as a National Wild and Scenic River, including a description of probable environmental consequences which would result from implementation of each alternative. It included an alternative which described the effects of continuing the existing decision-making situation along the river, with no management plan developed and implemented by the Forest Service. It did not include a "preferred" alternative. The Draft EIS was distributed to the public, scientists, and government officials for their review and comment.

STEP 6: SELECT A PREFERRED ALTERNATIVE, DEVELOP A MANAGEMENT PLAN, AND PREPARE A FINAL EIS

Public comments on the Draft EIS were received and analyzed, and in many cases generated changes in this document (the comments received and the Forest Service responses are included in Appendix D). As stated above, the Task Force reconvened and reached consensus on most aspects of a recommended preferred alternative. The completed Preferred Alternative and the Management Plan which was derived from it (included as Appendix E) were finalized by the Forest Service and are included in this Final EIS.

ISSUES

As mentioned under Step 1, issues were initially determined by identifying the concerns expressed during the scoping meetings held early in the planning process and in letters and conversations with concerned people and groups. In addition, as the Task Force met and discussed the management themes, issues, and alternatives, the issues were sharpened and some new aspects were discovered. Finally, as a result of the comments on the Draft EIS, and the Task Force's discussions about a preferred alternative, a couple of new aspects of existing issues were identified.

BOUNDARIES

The Wild and Scenic Rivers Act (W&SRA) was designed to protect rivers and river-related resources within their immediate environment. The act defines "immediate environment" as an area approximately one-quarter mile on each side of the designated river. In most cases, boundaries are drawn up to include the OR resource values for which the river was designated. Because OR values had not been identified at the time of designation, the Forest Service identified interim boundaries to protect river-related resources until a resource assessment was completed and the management plan was developed.

Several steps were taken to establish the river boundaries within the timeline established by the legislation, while ensuring that the viewpoints of interested individuals and groups were consid-

ered. Owners of the land adjacent to the river, user groups, the Yakima Indian Nation, elected officials, and other government agencies were notified, and a mailing list was compiled to keep them informed about the project. Specific boundaries and criteria for their delineation were drafted after review by the group and the Forest Service staff. These draft boundaries, the delineation criteria, and a questionnaire were presented to the public by mail and through a series of information workshops. During the 30-day public review period that followed, people responded to the proposed boundaries via questionnaire, or by contacting the Forest Service directly.

Final draft boundaries were released to the public on November 17, 1987, with the understanding that the boundary issue would be given further consideration throughout the planning process. During the forty-five day appeal period, several appeals were filed.

A negotiation process was initiated with representatives from Friends of the White Salmon, Friends of the Columbia Gorge, the National Wildlife Federation, the Columbia Gorge Coalition, SDS Lumber Company, Klickitat County Planning Department, and 55 landowners. Agreement was reached not to transmit the proposed boundaries to Congress, and to complete an Environmental Assessment.

Upon review of the Environmental Assessment, the final boundary decision was signed by Arthur DuFault, CRGNSA manager, on February 24, 1989. This decision was appealed by two landowners, but the Regional Forester, as the reviewing officer, upheld the manager's decision. The Regional Forester did direct the manager to reconsider the boundary issue as part of the planning process.

To provide protection of the river corridor during the planning process, the Klickitat County Commissioners implemented a 200-foot buffer zone of limited activity on both sides of the river until the County Shorelines Management Plan was updated and/or the river management plan was in place.

Boundary alternatives were considered in the Draft EIS, and the exact location of the final boundary has been the subject of considerable discussion and disagreement. Although agreement was reached with the Task Force on about 90% of the boundary location, the exact location of the boundary in the northeast portion of the area was not resolved. The disagreement on the boundary in that area is over whether more land should be included for biodiversity reasons versus distance from the river and river-relatedness.

ADMINISTRATION

The CRGNSA Act gave the Forest Service responsibility for developing a management plan and for administering the river, yet some interest groups would prefer another form of administration. Some would like to see control of the river maintained at a local level, either through county or state government, with minimal federal presence, while others think the National Park Service should administer the river. Various combinations of these preferences are reflected in the management alternatives described in Chapter II.

LAND ACQUISITION

At the time of designation, the lower White Salmon river corridor was entirely within private land ownership. The acquisition of private land by the federal government was a concern expressed at public meetings and throughout the planning process. Landowners are concerned about losing rights without compensation if stronger county zoning ordinances are instituted, or being forced to sell their property through federal condemnation. The Wild and Scenic Rivers Act limits acquisition in fee title to an average of 100 acres per river mile, and prohibits condemnation for fee title if more than 50% of the area within the boundary is publicly owned. Various options, including zoning ordinances, fee title purchase and the purchase of scenic and access easements have been discussed throughout the planning process.

INSTREAM RESOURCES

Water Quality and Quantity

People appreciate the year-round sustained flows of this glacial and spring-fed stream, the scenic character of the river, and its values for agriculture and recreation. Water quantity and quality are viewed as important, and are a particular concern of the Washington Department of Ecology. Some members of the public are concerned about the effects of agricultural practices, such as the use of pesticides, on water quality. Questions were also raised about the effects of septic systems on water quality.

Resident Fisheries

Resident fisheries are valued by those living in the area and those who travel to fish here. Some people fear that with increased public access and publicity, this outstanding resource will suffer, directly from increased fishing pressure and indirectly from other recreational activities. Resident fisheries was identified as one of the river's outstandingly remarkable values.

Anadromous Fisheries

Reintroduction of anadromous fish is another issue. While most are in favor of reintroduction, some argue that such action will have substantial impacts on the resident fishery and whitewater recreation (both OR resource values). Increased fishing and provision of access would also affect private property. It is not within the jurisdiction of the Forest Service to determine if reintroduction is appropriate. The basin planning process and the FERC relicensing process for Condit Dam will address this issue. The Forest Service will provide input into that environmental analysis (see "Coordination With Other Plans," Chapter IV).

BIOLOGICAL DIVERSITY

Protection of ecosystems, threatened and endangered species, and biological diversity are also issues related to management of upland resources. Protection of Oregon white oak ecosystems has been a particular concern of environmental

interest groups such as the Friends of the White Salmon. Representatives of the Washington Department of Wildlife, Washington Natural Heritage Program, Yakima Indian Nation, Washington Environmental Council, Friends of the White Salmon and the Forest Service have cooperated to compile existing data and identify future information needs and management options for Oregon white oak communities.

Many people and groups who commented on the Draft EIS think that the diversity of the plant and animal communities in the White Salmon River valley should have been determined to be one of the OR values for which the river was designated.

CULTURAL RESOURCES AND TRADITIONAL USES

Cultural resources have been a concern, due to the presence of a traditional longhouse site and a burial ground that are important to the River People. The parcel of land adjacent the cemetery is currently owned by SDS Lumber Company. Some people would like to see this area developed for interpretative opportunities. American Indian representatives have expressed opposition to recreational use of these areas; their primary interest is in maintaining traditional cultural practices at these sites.

Other traditional American Indian uses are also an issue. Some specific areas are considered important for spiritual and other traditional practices. In addition, many American Indians consider the entire White Salmon River valley important for continuing cultural practices such as gathering foods, medicinal plants and other materials, such as cedar bark and roots for basket-making.

RECREATION

Boating Opportunities

Boaters are concerned that certain qualities of their recreational experience will be negatively affected by increasing popularity of the river and increasing development pressures within the corridor. During the planning process, many

said they would like to "keep the river as it is," "keep it natural." Both private and commercial boaters expressed appreciation for what they perceive to be a relatively uncrowded, unhurried float through a fairly natural-appearing environment. While they would like to retain these qualities, they are concerned about regulations that may limit their boating opportunities.

Between the draft and the final, a great deal of discussion was focused on the issue of whether or not there is a need to limit use on the White Salmon River, whether a permit system should be instituted on the river if it is necessary to limit use, and, if use must be limited, how that use should be allocated between private boaters and people using commercial guides. In addition, there was considerable concern about limiting the number of commercial guides who operate on the river.

Natural Character of the River

Many recreationists and landowners are concerned about preserving the natural character of the river. Many say they like the river "as it is," and wonder if increased recreational use will cause increases in impacts such as litter, erosion, damage to plants and wildlife, and increased incidents of wildfire.

Access

Recreationists are concerned about public access to the river. The amount of privately owned land within the corridor currently limits access. In the past, boaters have been required to pay to get on the river, and again to get off. Currently, many pay a fee to launch at BZ Corner or below Husum Falls. Others launch from public land in the Husum area. People interested in enjoying the river from other than a boating perspective have even fewer opportunities for access.

Safety

Many boaters, landowners, and members of the volunteer emergency response team feel that a safety program is essential in order to ensure that recreationists are informed, have proper

equipment, and that emergency response time is improved. The death of a rafter in the Spring of 1991, as a result of a boating accident during a period of very high water, has intensified this issue. There is also a wide-spread concern over safety at the river access site at Husum Falls, with the present speed of traffic along the highway and conflicts with pedestrians, boaters, and sightseers at the falls.

Other Recreation Opportunities

Whitewater boating is currently the primary recreational activity on the lower White Salmon River. Some people would like to see additional recreation opportunities provided. Suggestions include: opportunities for hiking, nature study, cultural resource interpretation, picnicking, camping, bicycling, horseback riding, and fishing.

Facilities

Many boaters interviewed during the 1988 and 1989 boating seasons, and those represented on the Task Force believe some facility development within the corridor is necessary. They are concerned that there are no public restrooms except at the put-in and at Northwestern Lake, no litter containers nor picnic/rest stops.

Impacts to Private Property

Landowners are concerned that river users may not respect private property and may trespass, causing impacts such as litter and wildfire, and forcing landowners to assume an enforcement role. Landowners also expressed concern that current methods for reporting incidents of trespass are unclear and/or ineffective.

UPLAND RESOURCES

Landscape Character

Residents, visitors and recreationists, alike, appreciate the natural character and scenery of the river corridor. Many are concerned that commercial and residential development will replace the current mix of forestry, agriculture and natural features of the landscape.

Land Uses

Many residents of the river valley want to maintain their resource-based lifestyle. While they would prefer to keep the area "as it is," they are faced with increasing property taxes and land costs, development pressures, and regulations restricting land uses.

A study of forest lands in the northeast United States addresses changing trends in land use in response to similar pressures (Harper et al., 1990). Subdivision of land for the development of residences and second homes are causing dramatic changes in land use patterns in New England and New York. Lands in greatest demand at the highest prices are lakeshore and riverfront properties, followed by scenic ridges and land with access to major highways, especially in areas within commuting distance of metropolitan areas.

Land for recreation development has increased in value and demand in the northeast, and those who own parcels of forest land that are not

contiguous or well-suited for timber production have tended to subdivide and sell when the land there is an active real estate market (Harper et al., 1990). The real estate market in the Columbia River Gorge has escalated dramatically in the last five years, in part due to recognition of the area's outstanding windsurfing opportunities.

Landowner Concerns

Landowners are concerned that they will lose the right to manage their land as they see fit. Timber interests are concerned that their ability to realize a profit will be negatively affected by Wild and Scenic River management. Other landowners are concerned that river protection will impact traditional practices such as grazing, agriculture and construction of roads and bridges. Private landowners question whether federal designation will result in increased popularity of the area's recreation resources and increased incidents of trespass, litter and fire on their property. Other concerns include the effects of management on zoning, subdivision and value of private land.

CHAPTER II

THE
ALTERNATIVES



CHAPTER II

THE ALTERNATIVES

INTRODUCTION

PURPOSE

The purpose of Chapter II is to describe and compare the six alternatives which have been developed for management of the lower White Salmon River as a component of the National Wild and Scenic River System. It describes these alternatives in terms of the conditions which are intended to be created, the restrictions which would be placed on some activities and uses in order to achieve those conditions, and the expected outputs and effects which would result from their implementation.

ORGANIZATION

Chapter II contains the following sections:

- Changes which have occurred between the Draft EIS and the Final EIS
- A brief description of how the alternatives were developed
- Alternatives which were considered but not studied in detail
- An overview of each alternative
- A detailed description of each alternative formatted for easy review of each full alternative
- A tabular comparison of the outputs and effects of each alternative
- A summary of the Recreation Opportunity Spectrum, the Limits of Acceptable Change process, the Visual Management System, and the Region 6 Sensitive Species List
- A brief description of the following implementation considerations: monitoring, suitability of lands for timber production, acquisition of land or rights, and funding

CHANGES BETWEEN THE DRAFT EIS AND FINAL EIS

The major changes in this chapter have to do with adding Alternative 6, the Preferred Alternative. The format of the display, "Detailed Comparison of Alternatives," has been changed to make it easier to review a full alternative at one time. This was done so that a reviewer would not have to flip through as many pages while concentrating on the Preferred Alternative, and because it was felt that the side-by-side display is not as important for the Final EIS as it was for the Draft EIS. This new format has been retitled, "Detailed Description of Alternatives."

A detailed description of Alternative 6 has been added to the new format. Also, an overview of Alternative 6 has been added in the section, "Alternatives Considered in Detail." Finally, Alternative 6 has been added to Figure II-1: Outputs and Effects Table.

Other Changes include:

- the addition of a short description of the process which was used to develop the Preferred Alternative;
- the addition of a new alternative to the section, Alternatives Considered but Eliminated From Detailed Study. It concerns establishing boundaries which include more land than is authorized in the Wild and Scenic Rivers Act.
- the addition of a short description of the Forest Service, Region 6 Sensitive Species List;
- the addition of a new section, Implementation Considerations, which includes the topics, Monitoring, Suitability of lands for Timber Production, Acquisition of Land or Rights, and Funding.

- the deletion of the Monitoring section that was in the Draft EIS. A Monitoring Plan

has been included in Section III of Appendix E, the Management Plan.

DEVELOPMENT OF THE ALTERNATIVES

PROCESS

The alternatives analyzed in this document were developed with input from the public and the lower White Salmon Task Force. Each of the issues identified by the public, agencies, and the Task Force was discussed in detail and various desired conditions, options, and actions which could be used to resolve the issues were identified. Creation of a wide range of feasible solutions was explicitly sought. See Chapter I for a discussion of the issues and the public involvement process.

Once options for resolving issues were generated, the Forest Service planning team organized them into a set of five preliminary alternatives, each of which was consistent with its overall goal and which, taken together, represented a reasonable range. The alternatives were presented at a public meeting in White Salmon, WA in December 1989. Public comments were sought and used to refine the preliminary alternatives to the five displayed in the Draft EIS. No attempt was made to develop a "preferred" alternative for the draft. Between December 1989, and the time the Draft EIS was published in July 1990, the effects of the alternatives were analyzed, and the draft was prepared.

After the comments on the Draft EIS were received, analyzed, and consolidated, the Task Force was reconvened, and the consolidated comments were shared with them. A series of meetings were held with the Task Force to further discuss the alternatives in light of the information in the Draft EIS and the public comments. Over a period of six meetings beginning in December, 1990, and ending in March, 1991, the Task Force came to consensus on solutions for almost all of the issues. Using the consensus the Task Force achieved as a guide, and considering the public comments received on the Draft EIS, the Forest Service crafted the Preferred Alternative

which is included in this document as Alternative 6.

"NO ACTION" ALTERNATIVE

Regulations of the Council on Environmental Quality (CEQ) require that an alternative of "no action" be considered as part of the environmental analysis for a proposed action. Such an alternative was difficult to conceptualize because it was difficult to identify exactly what the "proposed action" is. The Wild and Scenic Rivers Act directs the Federal agency charged with the administration of a component of the Wild and Scenic River System to prepare a comprehensive management plan to provide for the protection of the river values. Preparation and adoption of a comprehensive management plan for the designated section of the White Salmon National Scenic River is what created the need for this EIS, so that is the "proposed action."

Therefore, the "no action" alternative is considered to be one which allows the river area to continue to evolve without benefit of a coordinated, comprehensive plan prepared and adopted by the Forest Service. Instead, the condition of the river area would be determined by the landowners, as it has in the past, under the laws that are currently in effect, and under the authorities of the governmental bodies and agencies who currently have jurisdiction in the area. Under this alternative, the Forest Service would not participate in the management of the river area, nor exercise the authorities given to it in the Wild and Scenic Rivers Act, with the exception of preventing any dams which would be proposed or supported by the federal government.

The analysis of the consequences of this alternative has indicated that existing laws and regulations would not, for all issues, provide adequately

for the required protection of Wild and Scenic River values. Therefore, it is felt that this alternative is not, in total, one which the Forest Service could legally implement.

PREFERRED ALTERNATIVE

The CEQ regulations also require that if one or more alternative exists, the agency's preferred alternative(s) be identified in the Draft EIS. The Draft EIS did not identify a preferred alternative because, at that time, there was no attempt by the Forest Service to develop a preferred alternative for the draft. As stated above, the Forest Service used the consensus from the Task Force and the public comments on the Draft EIS, to create Alternative 6, the Preferred Alternative.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

A number of alternatives were identified which, initially, seemed to provide important avenues for managing the lower White Salmon River. As the alternatives were examined, some of them no longer seemed to be useful; they fell outside the reasonable range which could be considered in this planning effort, or for some other reason were not analyzed in detail. The most important of these are identified below.

REINTRODUCTION OF ANADROMOUS FISH RUNS CONSIDERED

Reintroduction of anadromous fish (salmon and steelhead) upstream of Condit Dam has been under consideration for sometime. That decision is given focus through the relicensing process for Condit Dam, which is up for relicense in 1993. As part of the relicensing process, the various state and federal agencies managing fisheries, along with Pacific Power Company, are studying the feasibility and desirability of providing fish passage and reintroducing anadromous fish to the river above the dam.

There has been concern expressed by some people about possible effects that runs of anadromous

fish would have on current uses. There are also many interests that support the re-establishment of runs as they once existed before Condit Dam was built. It was originally intended that this EIS would explore alternatives for and against reintroduction and, as a result, make a recommendation to try to influence that decision so it would be most beneficial for Wild and Scenic River management.

Research into the issue showed that it is very complex, and there is critical information which is currently not available (see Appendix C for a discussion of this issue). In addition, because the decision about reintroduction could not be made as part of this planning process, it was decided to work within the relicensing process, in light of desired conditions for the White Salmon River, to help create a beneficial decision.

BOUNDARY EXPANSION TO INCLUDE MORE LAND THAN AUTHORIZED IN THE WILD AND SCENIC RIVERS ACT

Some comments on the Draft EIS suggested that the boundary should be expanded to include more land than is authorized in the Wild and Scenic Rivers Act in order to truly protect the natural qualities of the area, particularly biodiversity. The larger boundaries would allow for landscape level management of the area. During development of the Preferred Alternative, consideration was given to expanding the northeast boundary of the area for the purpose of including more oak stands and stands in later successional stages.

It would be possible to go to Congress to request an increase in the authorized amount of land which could be included in the boundaries. Such a request should be based on the necessity to protect outstandingly remarkable values. There is no question that including more of the land in the northeastern corner would increase the probability that biological diversity would be adequately protected. However, this alternative was not pursued in detail because the distance from the river is so great (more than ½ mile) that the vegetative communities are not related to the river and really do not fall within the intent of the Wild and Scenic Rivers Act. There

do not seem to be any vegetative communities existing in the area which are not already included within the existing boundary.

BOUNDARY LOCATION TO PROTECT THE PASTORAL SCENERY VIEWED FROM HIGHWAY 141

An issue in planning for the White Salmon River is maintenance of the attractive pastoral scenery of the largely agricultural area seen from Highway 141, the route which provides access to the put-in at BZ Corner. Establishing a boundary far enough west in the area between Husum and BZ Corner, and far enough east in the area south of Husum to include the cleared agricultural lands seen from the highway, was considered.

An analysis showed that to maintain the pastoral views from the highway would necessitate acquiring land considerably in excess of the number of acres allowed by the Wild and Scenic Rivers Act. In addition, there were concerns that this area was well beyond the ¼ mile average boundary width and contained many privately owned parcels. Finally, the pastoral scenery, while certainly high quality, was not judged to be outstandingly remarkable. For these reasons, this alternative was not pursued.

ALLOWING NO DIVISIONS OF EXISTING PROPERTIES TO BE SMALLER THAN 100 ACRES

In order to address the concern of maintaining the resource-based economy and the pastoral scenery, a suggestion was made to restrict subdivisions of large properties so that, where possible, properties which are currently larger than 100 acres and therefore economically suitable for farming or timber production would be maintained.

The current resource lands zone covering this area under the county zoning ordinance (see Chapter III, Land Use Controls) requires that lands which have the best suitability for resource use (agriculture and forestry) must maintain 95% of the land as open area in any subdivision,

and lands with good suitability must maintain 85% of the land as open area. While there are some weaknesses with this zone in the long term, it would serve to retain open space in the short term. Although the idea of allowing no divisions of land to be smaller than 100 acres was not included, at least three of the alternatives considered in detail would serve to meet the goal of maintaining the resource-based economy and pastoral scenery.

PARK SERVICE ADMINISTRATION

Some members of the public feel that the National Park Service should administer the White Salmon Scenic River. The legislation that added the lower White Salmon to the Wild and Scenic Rivers System designated the Secretary of Agriculture, through the Forest Service, to administer the river. The Forest Service does not have authority to consider the option of having another federal agency assume this responsibility. However, one of the alternatives considered in detail does identify the Park Service as playing a role in the administration of the river.

Park Service administration of the White Salmon River would not appear to be as efficient as Forest Service management, given the current location of agency headquarters. The closest Park Service office is in Vancouver, WA, while the Forest Service has established administrative units located much closer in Hood River, OR and Trout Lake, WA.

CREATION OF AN AMERICAN INDIAN CULTURAL CENTER

The concept of developing an American Indian cultural center near one of the significant cultural resource sites was raised by individuals interested in this area. The area is rich in cultural resources and some of the alternatives considered in detail do explore how these resources should be managed. However, the American Indians, who have strong ties to this area, did not support this concept. Therefore, the Forest Service did not pursue this alternative in detail.

DEVELOPMENT OF ADDITIONAL FISHING OPPORTUNITIES AT HUSUM

Interest was expressed by individuals during the public involvement process to develop a boat ramp and to facilitate a "put-and-take" (stocking fish specifically for sports fishing) fishery at Husum. While this concept was given serious consideration, it soon became apparent that doing so would cause a serious risk to the existing population of resident trout, which are considered an outstandingly remarkable resource value.

Development of a boat ramp would make it convenient to launch drift boats, which could cause increased fishing pressure on existing fish populations downstream. Such increased pressure would likely cause serious adverse effects to the population (Weinheimer 1990). Also, a put-and-take fishery would require heavy stocking of hatchery fish, and it was felt this could affect the genetic makeup of the existing population of wild fish. For these reasons, this alternative was dropped from detailed consideration.

ALTERNATIVES CONSIDERED IN DETAIL

GENERAL

Many alternatives for managing the White Salmon River could be developed which would adequately provide the protection of river values required by the Wild and Scenic Rivers Act. This document and process attempts to identify alternatives which represent a reasonable range, that is, which are feasible in terms of technical and economic factors, land and resource capability, and common sense. Six alternatives, including the "No Action" Alternative and the "Preferred Alternative," are examined in detail. Generally, the four alternatives other than No Action and Preferred are arranged along a continuum from greater protection and naturalness combined with less development and recreation use in Alternative 2, to less protection and naturalness combined with higher development and recreation use in Alternative 5. The Preferred Alternative, Alternative 6, fits within the range of the original five alternatives for all of the issues.

OVERVIEW OF ALTERNATIVES

ALTERNATIVE 1

The goal of Alternative 1 is to manage the White Salmon River under existing laws and authorities, with no Forest Service management plan for implementing the Wild and Scenic River designation. This alternative is displayed to meet the requirements of the National Environmental Policy Act Regulations to include the alternative of "no action".

Although the existing Wild and Scenic River boundary would remain in place, the Forest Service would not adopt a comprehensive management plan for the river, nor participate in its management. Rather, the agencies which currently have jurisdiction over the activities that take place within the river corridor would continue to exercise those jurisdictions. The major implications of this are:

- Outside the rural centers of Husum and BZ Corner, new residential and commercial

development would be excluded from the area within 100 feet of the river, and would be sparse in the next 100 feet. Beyond the 200-foot shorelines area, new development would be primarily controlled by the resource lands zone.

- A 50-foot buffer of undisturbed natural vegetation would be established adjacent to the river which would preclude timber harvest after 10 years, and would limit agricultural uses to non-intensive activities which would not adversely affect the natural vegetation.
- There would be no federal acquisition of lands for Wild and Scenic River purposes, and land which has already been acquired by the Forest Service would be disposed of. Therefore, recreation facilities and use would be dependent on private land developments, or purchases of land and development by the state or county. Whitewater recreation use probably would not be controlled unless safety problems developed.
- All other activities, including cultural resources protection, river flows and water quality, management of resident fisheries and possibly anadromous fish, maintenance of biological diversity, protection of unique or special plant communities, management of wildlife habitats, and protection of the scenery along the river would be controlled by state and county agencies. Primary control would come from Klickitat County through (a) the Shorelines Master Plan for the land within the first 200 feet from the river, and (b) the County Zoning Ordinance for the rest of the land within the area; Washington State Department of Natural Resources for timber management activities, and the State Department of Ecology for water rights, the hydraulics permitting process, and the non-degradation of water quality policy and enforcement.

ALTERNATIVE 2

The goal of Alternative 2 is to increase the naturalness of the river corridor within as large a boundary as the Wild and Scenic Rivers Act allows. This would be done, in part, by creating a 400-foot wide buffer of natural vegetation on each side of the river within which no new residential, commercial, agricultural, or forestry development would be allowed, and within which existing agricultural and some other uses would be converted to forest.

Outside the buffer, up to 50% of the existing agricultural acreage would be converted to forest, and no new residential or commercial uses would be allowed except in the rural centers of Husum and BZ Corner. Klickitat County would be encouraged to limit the potential overall size of the two rural centers and to substantially reduce the allowable density of future development.

A high level of biological diversity would be restored and maintained. Habitats for threatened, endangered, sensitive, and management indicator species (pileated woodpecker, cavity excavators) would be maintained or enhanced. Only natural ecological processes would be allowed to take place in areas such as old-growth communities, Oregon white oak communities, wildlife travel corridors, riparian habitat, etc. Outside these areas and the buffer, timber stands would be managed on an uneven-aged basis to protect the forest appearance as seen from the river, Highway 141, and the rural centers of Husum and BZ Corner.

The recreation experience would be managed to maintain low levels of perceived crowding and high levels of naturalness. A permit system to limit use to present levels would be implemented for both commercial and private boaters. No recreation facilities would be provided, other than adequate parking and sanitation at the put-ins and take-outs at BZ Corner, Husum, and Northwestern Lake. Additional recreation use would be directed outside the corridor.

Both water quality and instream flows would be increased. No new water intake structures could be built, and existing ones would be removed or

their intrusiveness reduced. Woody debris would be allowed to accumulate naturally in the river.

Cultural resources would be inventoried and evaluated throughout the White Salmon River valley. All sites within the boundary would be protected and a comprehensive interpretive plan would be developed.

ALTERNATIVE 3

The goal of Alternative 3 is to maintain the current character of the river area within the boundaries which are currently established. This would be done, in part, by creating a 200-foot wide buffer on each side of the river within which no new residential, commercial, agricultural, or forestry development would be allowed. Existing agricultural uses would be allowed to continue. Outside the buffer, the approximate existing proportions of agricultural and forest acreages would be maintained.

Outside the rural centers, new residential uses would be allowed at a density that, on the average, is very low, but they would be clustered on the least critical 5% of the land. Klickitat County would be encouraged to limit the potential overall size of the two rural centers and to substantially reduce the allowable density of future development.

Habitats for threatened, endangered, sensitive, and management indicator species would be maintained or enhanced. The current level of biological diversity would be maintained partially by prohibiting timber harvest in the buffer and in areas such as old-growth communities, riparian habitat, and wetlands. Active management, including controlled timber harvest, would be aimed at perpetuating Oregon white oak as a significant component of selected timber stands, and enhancing winter range for black tailed deer. Timber stands outside these areas would be managed to maintain the forested appearance of presently forested areas as seen from the river, Highway 141, and the rural centers.

The recreation experience would be managed to maintain low to moderate levels of perceived crowding, and moderate to high levels of natural-

ness. A limit would not be placed on the number of commercial and private boaters unless other, less intrusive measures, were unsuccessful at maintaining the desired physical and social conditions. Adequate parking and sanitation, plus a small picnic ground would be provided at the put-ins and take-outs at BZ Corner, Husum, and Northwestern Lake. A few short trails to points of interest and a short trail paralleling the river at a distance would be provided. In addition, there would be a bicycle trail along Highway 141 between Husum and BZ Corner.

Water quality would be improved, while instream flows would be maintained at current levels. No new water intake structures would be built and existing ones would be removed or their intrusiveness reduced. Woody debris would be left to accumulate in the river unless it is a safety hazard to river runners.

Cultural resources would be inventoried only within the river boundary and on a voluntary basis on private lands. Higher priority sites would be considered for protection through acquisition, and interpretation would be focused on specific properties.

ALTERNATIVE 4

The goal of Alternative 4 is to minimize effects on private landowners by establishing narrow boundaries, while providing at least minimum levels of protection and enhancement of important river values. This would be done, in part, by creating a 100-foot wide buffer on each side of the river within which no new residential, commercial, agricultural, or forestry development would be allowed. Existing agricultural uses would be allowed to continue. Outside the buffer, up to 25% of the existing forest acreage could be converted to agricultural uses.

Outside the rural centers, new residential uses would be allowed at a moderately low average density, and they would be clustered. New commercial uses not directly related to agriculture and forestry, or recreation, would not be allowed. Klickitat County would be encouraged to limit the potential overall size of the two rural centers

and to reduce the allowable density of future development.

Habitats for threatened, endangered, sensitive, and management indicator species would be maintained. Rare and significant plant communities within the boundary would be maintained by prohibiting timber harvest in the buffer and in canyon ecosystems, riparian habitat, and wetlands. Forestry practices outside these areas would be designed so they are not substantially visible from the river.

The recreation experience would be managed to allow moderate levels of perceived crowding and naturalness. A limit would not be placed on the number of commercial and private boaters unless other, less intrusive measures, were unsuccessful at maintaining the desired physical and social conditions. Adequate parking and sanitation, and small picnic grounds would be provided at the put-ins and take-outs at BZ Corner, Husum, and Northwestern Lake. In addition, a couple of small picnic/rest stops, accessible only from the river, would be provided, one above and one below Husum. Only a few short trails would be provided.

Water quality would be maintained, but instream flows could drop to the minimum necessary to protect whitewater recreation, fisheries, and the significant hydrological processes. New water intake structures could be built if they did not adversely affect river values. Woody debris would be left in the river unless it would be a safety hazard to river runners or threaten private property.

Cultural resources would be managed as in Alternative 3, except that an oral history would not be completed and sites would only be acquired if necessary to protect them from eminent threats. Only significant sites would be interpreted.

ALTERNATIVE 5

The goal of Alternative 5 is to minimize effects on private landowners by establishing narrow boundaries, while providing at least minimum levels of protection and enhancement of important river values and substantially increasing

recreation opportunities for river users and others. In this alternative, a variable width buffer (50-150 feet wide) would be established on each side of the river, based on topographic breaks and screening vegetation. Within the buffer, no new residential, commercial, agricultural, or forestry development would be allowed. Existing agricultural uses would be allowed to continue.

Outside the buffer, up to 25% of the existing forest acreage could be converted to agricultural uses. Outside the rural centers, new residential uses would be allowed at a moderately low density, but they would be spread out along the buffer. New commercial uses would be allowed subject to zoning restrictions. Klickitat County would be encouraged to limit the potential overall size of the two rural centers and to reduce the density of development.

Habitats for federally listed threatened, endangered, and sensitive species would be maintained. Timber harvest would be prohibited in the buffer and in canyon ecosystems, riparian habitat, and wetlands. Forestry practices outside these areas would be designed so they are not visually dominant as seen from the river.

The recreation experience would be managed to allow moderate to high levels of perceived crowding and moderate to low levels of naturalness. A limit would not be placed on the number of commercial and private boaters unless other, less intrusive measures, were unsuccessful at maintaining the desired physical and social conditions or safety is threatened. Substantial recreation development would take place including: large picnic grounds at the put-ins and take-outs at BZ Corner, Husum, and Northwestern Lake; a couple of small picnic/rest stops, accessible from the river and the road; and a public campground accessible from the river and the road. An extensive trail system would be provided.

In this alternative, it would be recommended to the State of Washington to include the White Salmon River in the Washington State Scenic River system. Administration of the river area would then be by a cooperative management

committee, including the Forest Service, under the State program.

Water quality would be maintained, but instream flows could drop to the minimum necessary to protect whitewater recreation, fisheries, and the significant hydrological processes. New water intake structures could be built if they did not adversely affect river values. Woody debris would be left in the river unless it would be a safety hazard to river runners or threaten private property.

Cultural resource surveys would only be conducted in response to development proposals. Acquisition and interpretation would be to support recreation management needs.

ALTERNATIVE 6

Alternative 6 is the "Preferred Alternative". The goal of Alternative 6 is to maintain the current character of the river area and provide long-term protection and enhancement of its outstandingly remarkable values. Boundaries are very similar to the boundaries currently established, with some minor additions and deletions. A key aspect of Alternative 6 is a tentative agreement with SDS Lumber Company for the Forest Service to acquire all SDS lands within the boundary through exchange - almost 40% of the land within the boundary.

Through cooperation with Washington State Department of Ecology, instream flows would be maintained at current levels and water quality would either not be degraded, or, if necessary, improved through a technical assistance program. Non-intrusive water intake structures could be built, and owners would be encouraged to reduce the adverse impacts of existing ones.

The current level of biological diversity would be maintained or enhanced within the boundary primarily by managing the lands acquired from SDS and the buffers to protect specifically identified plant communities, perpetuating existing stands of Oregon white oak, and increasing the amount of vegetative communities which are in late successional stages. Studies would be

done to determine whether biological diversity is an outstandingly remarkable value.

A comprehensive oral history and archival inventory would be compiled of all cultural resource sites within the entire White Salmon River valley. On-the-ground surveys would be performed on all public lands within the boundary and on private land with a high probability of having significant sites. Significant sites would be protected through acquisition if necessary.

The recreation experience would be managed to maintain low to moderate perceptions of crowding and moderate to high levels of naturalness and isolation along the river. If use limits become necessary, each person who wants to boat the river, whether commercially or as a private boater, would have an equal opportunity to do so. A permit system would not be established unless non-permit methods for managing and limiting use are unsuccessful in practice.

Adequate parking, sanitation, and picnic facilities would be provided at the put-ins and take-outs. Two boat-in picnic sites, a couple of interpretive trails which do not provide access to the river, and a bicycle trail along Highway 141 would be developed.

A 200-foot wide buffer would be established on each side of the river, except in Husum, where the buffer would be 100 feet wide. Existing uses within the buffer could continue, but no new residential or commercial development, or new agricultural or forestry activities could take place.

Agricultural and forestry uses could take place outside BZ Corner, Husum, the buffer, and federal, according to state and county regulations. New housing development would be low and clustered on the least productive 5% of the land. In BZ Corner and Husum, residential and commercial development could be about half what is allowed under current county zoning.

DETAILED DESCRIPTION OF ALTERNATIVES

The six alternatives which were fully analyzed appear in the following display, Detailed Description of Alternatives. Each alternative follows the same arrangement of the issues so they can be readily compared.

The reader should bear in mind that in Alternatives 2 through 6, when the management direction is to regulate, prevent, prohibit, or otherwise control what happens on private land, the federal government can only do this by purchasing from the landowner, in fee simple or through a scenic easement, the rights which are to be controlled. Therefore, landowners would be fully compensated for any rights they turn over to the federal government.

Following the Detailed Description of Alternatives, is the Outputs and Effects Table, Figure II-1. This table displays many of the expected consequences of the alternatives so the reviewer is better able to compare the differences between them.

DETAILED DESCRIPTION OF ALTERNATIVES

ALTERNATIVE 1

ISSUE	ALTERNATIVE 1
GOAL OF ALTERNATIVE	Manage Under Existing Laws and Authorities (Primarily County and State) With No Forest Service Participation in Implementing the Wild and Scenic River Designation. (NEPA "No Action" Alternative)
BOUNDARIES	The existing wild and scenic river boundary applies. The Klickitat County Shorelines Master Plan applies to all land within 200' from the ordinary high water mark on each side of the river and regulates many uses (approximately 50 acres/mile). Total acres = about 385.
ADMINISTRATION	Klickitat County, plus state and federal agencies with current jurisdiction.
ACQUISITION	No further acquisition by Forest Service. Land already acquired by F.S. will be disposed of.
INSTREAM RESOURCES INSTREAM FLOWS	Instream flows would be determined by existing State Department of Ecology water rights rules and regulations and adjudication process. Minimum flows could be established by the State.
STREAM CHARACTER	Deny consent to the issuance of any license, permit, or other authorization for a federally assisted water resources project that would have a direct and adverse effect on the values for which the river was designated. Utilize existing State Department of Ecology hydraulics permitting process.
WATER QUALITY	Water quality would be controlled by State Department of Ecology non-degradation policy and enforcement.
FISHERIES	The Forest Service would not participate in the sub-basin planning process, Condit Dam relicensing process or any resident fish programs.
BIOLOGICAL DIVERSITY LEVEL OF PROTECTION	Forest Service would not be involved in preventing adverse effects on threatened, endangered, and sensitive plant and animal species.
INVENTORIES	No new requirements - follow State laws and guidelines.
SPECIES INTRODUCTION	No new requirements - follow State laws and guidelines.
CULTURAL RESOURCES INVENTORY	State or county would inventory sites in response to project proposals under state and county regulations.
EVALUATION	State and county officials would evaluate sites in response to project proposals.
PROTECTION/ACQUISITION	No federal acquisition under existing federal or state laws.
INTERPRETATION/ENHANCEMENT	Interpretation only provided through private parties, or county or state agencies.

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 1 (continued)

ISSUE	ALTERNATIVE 1
<p style="text-align: center;">RECREATION WHITEWATER BOATING Experience Opportunities</p> <p style="text-align: right;">Safety</p> <p style="text-align: right;">River Access</p> <p style="text-align: center;">INTERPRETATION/INFORMATION</p> <p style="text-align: center;">OTHER RECREATION FACILITIES Developed Sites</p> <p style="text-align: right;">Trails</p>	<p>Use levels would not be addressed by the Forest Service (FS would make no determination regarding physical and social carrying capacity of the river, nor efforts to mitigate impacts of recreation). Current state and county regulations and procedures would address problems of trespass, vandalism, litter & fire.</p> <p>Current state laws address safety requirements for on-river use. However, the Forest Service would not assume enforcement duties under this alternative. Klickitat County will continue to respond to river related emergencies.</p> <p>No federal access points would be provided to the river. County, state, and private parties will determine access point locations and amounts.</p> <p>Any information or interpretation facilities would be provided by county, state, or private parties. Forest Service would no longer provide river map/guides.</p> <p>No federally developed recreation sites would be provided for recreationists.</p> <p>No trails would be developed by the Forest Service.</p>
<p style="text-align: center;">UPLAND RESOURCES CHARACTER AND SCENERY OF THE RIVER</p> <p style="text-align: right;">ROADS AND BRIDGES</p> <p style="text-align: right;">GRAZING</p> <p style="text-align: center;">AGRICULTURE (Including Orchards) Within Buffer</p> <p style="text-align: right;">Outside Buffer</p> <p style="text-align: center;">FORESTRY Within Buffer</p> <p style="text-align: right;">Outside Buffer</p>	<p>Maintain a 50' natural buffer in which a one time harvest of 30% of merchantable stems may be made within the next 10 years. Such a harvest may be made within remainder of 200' Shorelines Zone every 10 years. Comply with Forest Practices Act.</p> <p>County Shorelines Management Plan provides some guidelines concerning appearance of developments as seen from the river, however, there are no visual quality objectives (VQO) established.</p> <p>No new restrictions - follow State and County laws and ordinances.</p> <p>No new requirements. Follow State and County laws and ordinances.</p> <p>Allow agricultural practices in accordance with current regulations. (Klickitat Co. Shorelines Master Plan, etc.)</p> <p>No new restrictions - follow state and county laws and ordinances.</p> <p>Allow forestry practices in accordance with current regulations. (Klickitat Co. Shorelines Master Plan, Forest Practices Act, Timber, Fish & Wildlife guidelines, etc.</p> <p>No new restrictions - follow State and County laws and ordinances.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 1 (continued)

ISSUE	ALTERNATIVE 1
<p>UPLAND RESOURCES (cont) RESIDENTIAL AND COMMERCIAL DEVELOPMENT</p> <p><i>Outside Rural Centers - Within Buffer</i></p> <p><i>Outside Rural Centers - Outside Buffer</i></p> <p><i>Inside Rural Centers - Within Buffer</i></p> <p><i>Inside Rural Centers - Outside Buffer</i></p>	<p>As contained in the proposed Shorelines Master Plan, no new residential development within 100' of OHWM. Commercial development prohibited within 200'.</p> <p>As contained in the proposed Shorelines Master Plan, residential development is allowed in the area between 100' and 200' from the OHWM, but requires a 660' frontage. Outside the 200' zone, the Resource Lands Zone applies - average density could vary between 1 residence per 20 acres and 1 residence per 1.3 acres depending on land suitability, and would be clustered.</p> <p>Include landscaping appropriate to the environment.</p> <p>As contained in the proposed Shorelines Master Plan, No new residential development within 50' or commercial development within 100' of OHWM.</p> <p>Rural Center sizes as in County zoning ordinance (aprox. 112 acres for BZ Corner and over 385 acres for Husuin.)</p> <p>5,000 sq.' min. lot size (if served by community water and sewer system) with 100' min. lot width for residential use, and 50' for commercial.</p> <p>No frontage requirement.</p> <p>Include landscaping appropriate to the environment.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 2**

ISSUE	ALTERNATIVE 2
GOAL OF ALTERNATIVE	Enhance all W&S River Values and Increase the Naturalness of the Area
BOUNDARIES	Expand boundary to the full 320 acres/mile allowed by the Wild and Scenic Rivers Act (average ¼ mile from river on each side). Total acres = about 2,465.
ADMINISTRATION	Forest Service with an advisory committee of local, regional, national, and tribal interests.
ACQUISITION	Acquire in fee up to limit allowed in the Wild and Scenic Rivers Act (100 acres/mile X 7.7 miles long = 770 acres total); acquire scenic easements on other properties where they are needed in order to meet the management direction.
INSTREAM RESOURCES INSTREAM FLOWS STREAM CHARACTER WATER QUALITY FISHERIES	<p>Allow no new withdrawals; acquire existing rights from willing sellers to increase flows.</p> <p>Same as Alt. 1, and in addition, allow no new structures or modifications within the high water channel; remove or reduce intrusion of existing structures; allow no removal of woody debris.</p> <p>Monitor and coordinate with state to enforce existing non-degradation policy. In addition, if current practices on some lands are degrading water quality, acquire rights on those lands in order to improve water quality.</p> <p>Cooperate with the Wash. State Dept. of Wildlife in resident fish protection projects. Recommend the adoption of strong harvest regulations to protect resident fish populations, including such things as catch and release, barbless hooks, no bait, restricted seasons etc.</p> <p>Provide input during the sub-basin planning process and Condit Dam relicensing process to assure that wild and scenic river values are protected in decisions affecting anadromous fish reintroduction. If it is decided to reintroduce anadromous fish above Condit Dam, update the river management plan using a task force approach.</p>
BIOLOGICAL DIVERSITY LEVEL OF PROTECTION INVENTORIES SPECIES INTRODUCTION	<p>Maintain or enhance habitats for federal and state listed threatened, endangered, and sensitive plant and animal species and management indicator species (pileated woodpecker and cavity excavator species). Through natural ecological processes, maintain or enhance identified old growth communities, replacement old-growth stands, Oregon white oak communities occurring in pure and mixed stands, travel corridors for wildlife, canyon ecosystems, riparian habitat, and wetlands.</p> <p>Perform a comprehensive inventory of the wildlife, plants, and plant communities which are located within the boundaries.</p> <p>Prevent introduction of non-native plant or animal species that are not already present in the area - agricultural crops excluded.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 2 (continued)**

ISSUE	ALTERNATIVE 2
CULTURAL RESOURCES INVENTORY EVALUATION PROTECTION/ACQUISITION INTERPRETATION/ENHANCEMENT	<p>Compile a comprehensive & systematic oral history and archival inventory of all sites, including traditional & spiritual uses, within the White Salmon River drainage. Perform on-the-ground survey of all lands within the boundary.</p> <p>Evaluate all cultural sites (historic, prehistoric, spiritual, and other areas of traditional uses) identified in the inventories. Assess sites under existing program eligibility criteria and guidelines for significance.</p> <p>Protect all cultural sites determined to be significant within boundary through acquisition (fee-title or easements). Develop site specific management plans to protect sites. Monitor sites.</p> <p>Develop an overall interpretive management plan that addresses both on- and off-site interpretation for all types of cultural sites represented within and adjacent to river boundaries. Includes an off-site interpretive facility for public information and education.</p>
RECREATION WHITEWATER BOATING Experience Opportunities Safety River Access INTERPRETATION/INFORMATION OTHER RECREATION FACILITIES Developed Sites Trails	<p>Provide a "semi-primitive non-motorized" boating experience (low levels of perceived crowding and high levels of naturalness - see Recreation Opportunity Spectrum (ROS) description later in this chapter). Restrict boating opportunities to 1988 use levels by implementing a permit system for private and commercial boaters. Allocate use between commercial and private boaters based on use ratios during the 1988 season. Distribute use among commercial outfitters based on 1988 use ratios. Limit motorized watercraft to Northwestern Lake and below.</p> <p>Develop a safety plan with county, state and federal participation. Use the permit system to ensure that commercial operators are qualified, insured, and are aware of the necessary safety equipment, and that private boaters are exposed to safety information and the need for proper safety equipment.</p> <p>Provide only one cable launch site at BZ Corner, a take-out at the head of Northwestern Lake, and at Husum, a take-out above, a portage around, and a put-in below the falls (all federal facilities, open to the public).</p> <p>Continue to provide river map/guide at BZ Corner put-in, Husum Falls, and the take-out at Northwestern Lake. Add information which would: 1) address private land ownership; 2) encourage low-impact recreation and protection of resource values ; 3) address boating skill levels, safety concerns, portaging Husum Falls, procedures at the take-out and respect for other user groups; and 4) direct additional recreation use outside the boundary.</p> <p>Provide public sanitation and parking (federal facilities), in appropriate amounts, only at the put-ins and take-outs at BZ Corner, Husum, and Northwestern Lake.</p> <p>Do not develop any trails. Prevent off-road use of vehicles within the boundary, except for necessary agricultural or forestry uses.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 2 (continued)

ISSUE	ALTERNATIVE 2
<p>UPLAND RESOURCES CHARACTER AND SCENERY OF THE RIVER</p>	<p>On each side of the river, provide a 400-foot buffer of essentially undisturbed natural vegetation in which there is no commercial timber harvest, no agricultural uses, and no new residential or commercial development. Phase out existing developments if they are creating adverse effects. Do not manipulate vegetation in the buffer unless needed to maintain or enhance desired wild and scenic river characteristics.</p> <p>Assure that new activities or developments outside the buffer are not visible from the river. Phase out existing visible activities and developments. VQO is retention.</p>
ROADS AND BRIDGES	<p>Allow no new roads except as needed for an approved activity. No new bridges. New roads must not be visible from the river or Highway 141. Construct and treat roads so there is no erosion which enters the river. Revegetate cut and fill slopes immediately. Existing roads and bridges may be maintained or replaced in the same location.</p>
GRAZING	<p>Prevent grazing within the buffer. Require grazing plans in areas of existing old-growth stands, identified replacement stands for old-growth, Oregon white oak communities, riparian areas, and wetlands. Grazing plans will specify standards for utilization of forage, wildlife passage of fences, alternate water sources, salting away from streams, etc. so that maintenance of natural understory vegetation, oak regeneration, and wildlife forage is assured.</p>
<p>AGRICULTURE (Including Orchards) Within Buffer</p>	<p>Prevent new agricultural clearings within the buffer (400' from the ordinary high water mark [OHWM]). Phase out agriculture currently being practiced within this area, and allow area to revert to a natural condition.</p>
Outside Buffer	<p>Except in the rural centers, maintain all the undeveloped land for agriculture and forestry. Convert agricultural uses, especially those visible from the river, to forest (up to 50% of existing acreage). Concentrate remaining agricultural uses along Highway 141.</p>
<p>FORESTRY Within Buffer</p>	<p>Prevent timber harvest within the buffer (400' from the OHWM) unless needed to create diversity or achieve other desired wild and scenic river characteristics. Allow area to revert to an essentially natural condition.</p>
Outside Buffer	<p>Except in the rural centers, maintain all the undeveloped land for agriculture, forestry, and the maintenance or enhancement of the diversity of plant and animal species. Prevent harvesting in identified old-growth communities, replacement old-growth stands, stands containing Oregon white oak, travel corridors for wildlife, pileated woodpecker habitat, canyon ecosystems, riparian habitat, and wetlands. Outside of those areas, protect intact viewsheds as seen from the river, Hwy. 141, Husum, and BZ corner by using uneven-aged silvicultural systems.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 2 (continued)

ISSUE	ALTERNATIVE 2
<p>UPLAND RESOURCES (cont) RESIDENTIAL AND COMMERCIAL DEVELOPMENT</p> <p><i>Outside Rural Centers - Within Buffer</i></p> <p><i>Outside Rural Centers - Outside Buffer</i></p> <p><i>Inside Rural Centers - Within Buffer</i></p> <p><i>Inside Rural Centers - Outside Buffer</i></p>	<p>No new residential or commercial development, including septic drainfields, within 400' of OHWM. Acquire existing properties which are adversely affecting the area.</p> <p>Allow no new residential or commercial development. Acquire existing properties which are adversely affecting the area. Encourage County to strengthen Resource Lands Zone to provide a minimum average density of 1 residence per 20 acres throughout the corridor, 95% open-space in all land divisions, and no redivision.</p> <p>Reduce visibility of existing structures through purchase, or with screening, color change, change in materials, etc.</p> <p>No new residential or commercial development, including septic drainfields, within 400' of OHWM.</p> <p>Encourage County to limit development of the rural centers of Husum and BZ Corner to 50 acres outside the buffer. Maintain 45 acres of each Center for residential use.</p> <p>Limit density to 1 unit/acre with 100' minimum lot width.</p> <p>No frontage requirement.</p> <p>Blend new structures into the environment by retaining screening vegetation, and using appropriate materials and colors. Reduce visibility of existing structures through purchase, or with screening, color change, change in materials, etc.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 3**

ISSUE	ALTERNATIVE 3
GOAL OF ALTERNATIVE	Maintain Current Character of the River Area
BOUNDARIES	Use existing boundaries (approximately 245 acres/mile - average about 1,000' from river on each side). Total acres = about 1,880.
ADMINISTRATION	Cooperative management committee with different county, state, and federal agencies (including National Park Service) taking responsibility for different components; advisory committee as in Alt. 2.
ACQUISITION	Acquire fee title or scenic easements where needed to maintain the current character of the river area and to protect OR values and other important river values.
INSTREAM RESOURCES INSTREAM FLOWS STREAM CHARACTER WATER QUALITY FISHERIES	Allow no new withdrawals; assure that current levels of flow are maintained. Construct a gauge at Husum to indicate water levels. Same as Alt. 2, except allow limited removal of woody debris for safety of river runners only. Sponsor semi-annual river clean-up. Preserve historic river-related structures (e.g., old water turbine) for interpretive purposes. Monitor and coordinate with state to enforce existing non-degradation policy. Improve water quality by assisting landowners in voluntarily improving practices if they are currently degrading quality. Same as Alternative 2.
BIOLOGICAL DIVERSITY LEVEL OF PROTECTION INVENTORIES SPECIES INTRODUCTION	Maintain or enhance habitats for federal and state listed threatened, endangered, and sensitive plant and animal species and management indicator species (pileated woodpecker and cavity excavator species). Manage to perpetuate white oak plant communities. Maintain approximately the same level of biological diversity that presently exists within the area by protecting old-growth communities, identified replacement old-growth stands, canyon ecosystems, riparian habitat, and wetlands. Perform inventories of threatened, endangered, and sensitive species, old-growth communities, Oregon white oak communities, deer winter range, management indicator species (pileated woodpecker and cavity excavator species), and other ecological communities (such as canyon ecosystems, riparian habitat, wetlands), which are important to maintaining existing biological diversity. Same as Alternative 2.

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 3 (continued)**

ISSUE	ALTERNATIVE 3
CULTURAL RESOURCES INVENTORY EVALUATION PROTECTION/ACQUISITION INTERPRETATION/ENHANCEMENT	<p>Similar to Alt. 2, except compile oral history and archival inventory only within the boundary and perform on-the-ground surveys only on public lands within the boundary, unless private landowners voluntarily allow surveys to be done. On other private lands, inventory sites in response to project proposals.</p> <p>Same as Alternative 2.</p> <p>Prioritize significant cultural sites for phased acquisition by Forest Service, Bureau of Indian Affairs, Yakima Indian Nation, and the State of Washington. Develop a management plan for each property. Monitor sensitive sites.</p> <p>Same as Alt. 1 except interpretation focused on specific properties. Do not interpret sites/uses outside boundaries.</p>
RECREATION WHITEWATER BOATING Experience Opportunities Safety River Access INTERPRETATION/INFORMATION OTHER RECREATION FACILITIES Developed Sites Trails	<p>Provide a "semi-primitive non-motorized" boating experience (low to moderate perceptions of crowding and moderate to high levels of naturalness). Use the LAC process (See LAC description later in this chapter) to establish standards of acceptable change in the physical and social environment. Monitor conditions to ensure standards are not exceeded. If standards are approached, implement actions to maintain standards. If less intrusive management actions (such as public information programs, voluntary staggering of launches) are unsuccessful at maintaining standards, limit use levels by implementing a permit system for private and commercial boaters which freezes use to the levels at which the standards are reached. Allocate use between commercial and private boaters based on the percentage of use by both groups at the time the standards are reached. Distribute use among commercial outfitters based on percentage of use at the time the use limits are reached. Limit motorized watercraft to Northwestern Lake and below.</p> <p>Same as Alt. 2, except implement a mandatory self-registration system for private boaters to ensure that they are exposed to safety information and the need for proper safety equipment. (If, in the future, a permit system is needed to limit use, that would take the place of the self-registration system.)</p> <p>Same as Alt. 2, except limit cable launch sites at BZ Corner to two, at least one of which would be a federal facility or would be provided to the the public through agreements with other agencies or private parties.</p> <p>Same as Alt. 2, plus provide interpretation/education opportunities at points of interest, such as the falls above the put-in, Spring Creek, and the stand of large trees, as well as at the put-in, take-out and Husum Falls area.</p> <p>Same as Alt. 2, plus picnic facilities only at the same locations. Facilities would be provided by the federal government or through agreements with other agencies or private parties.</p> <p>Construct a few short trails to specific points of interest, and a trail away from, but paralleling the river between the stand of large trees and BZ Corner. Develop a bicycle trail along Hwy. 141 between Husum and BZ Corner. Prevent off-road use of vehicles on federally owned lands and in the buffer, except for necessary agricultural or forestry uses.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 3 (continued)**

ISSUE	ALTERNATIVE 3
UPLAND RESOURCES CHARACTER AND SCENERY OF THE RIVER	<p>Same as Alt. 2, except buffer width is 200 feet on each side of the river and existing agricultural uses, except grazing, may continue. Vegetation may also be manipulated if needed for existing agricultural uses, to create biological diversity, or to provide needed recreation facilities.</p> <p>Assure that new activities or developments outside the buffer are not evident as seen from the river. VQO is retention.</p>
ROADS AND BRIDGES	Same as Alt. 2, except new roads may be partially visible from highway 141.
GRAZING	Same as Alt. 2, except also prevent grazing in developed recreation sites, and grazing plans need only be required for white oak communities, riparian areas, and wetlands.
AGRICULTURE (Including Orchards) Within Buffer	Prevent new agricultural clearings within the buffer (200' from the OHWM). Existing agricultural practices may continue unless they adversely affect water quality.
Outside Buffer	Maintain agricultural uses at about the same level as existing. Except in the Rural Centers, maintain the most suitable 95% of the land for agriculture and forestry. Provide additional mechanism(s) to ensure/enhance viable agriculture.
FORESTRY Within Buffer	Same as Alt. 2 except the buffer is 200' from the OHWM.
Outside Buffer	<p>Except in the rural centers, maintain the most suitable 95% of the land for agriculture and forestry. In order to maintain current levels of biological diversity, prevent timber harvest in old-growth ecosystems, pileated woodpecker habitat, canyon ecosystems, riparian habitat, and wetlands. Actively manage forest lands to perpetuate selected white oak stands. Design forestry practices so they are not evident from the river, and to maintain a forested appearance of presently forested areas as seen from Highway 141, Husum, and BZ Corner.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 3 (continued)

ISSUE	ALTERNATIVE 3
<p>UPLAND RESOURCES (cont) RESIDENTIAL AND COMMERCIAL DEVELOPMENT</p> <p><i>Outside Rural Centers - Within Buffer</i></p> <p><i>Outside Rural Centers - Outside Buffer</i></p> <p><i>Inside Rural Centers - Within Buffer</i></p> <p><i>Inside Rural Centers - Outside Buffer</i></p>	<p>No new residential or commercial development, including septic drainfields, within 200' of OHWM.</p> <p>Allow some new residential development, but no new commercial uses other than operating farms, orchards, and home occupations, (which includes intensification or enhancement of farm/forestry uses). Overall density would be 1 residence per 40 acres with residences clustered in the 5% of the land which is least suitable for forestry or agriculture. Density within the 5% would be 1 residence per 2 acres with a minimum frontage of 400' on the buffer. Encourage County to strengthen Resource Lands Zone as in Alt. 2.</p> <p>Allow no new development which would be evident from the river, highway 141, BZ Corner or Husum. Reduce visibility of existing structures with screening, color change, change in materials, etc.</p> <p>No new residential or commercial development, including septic drainfields, within 200' of OHWM.</p> <p>Encourage County to limit expansion of the rural centers of Husum and BZ Corner to 75 acres outside the buffer. Maintain 65 acres of each Center for residential use.</p> <p>Limit density in commercial core to 2 units/acre with 100' minimum lot width. Limit density in residential area to 1 unit/acre with 100' minimum lot width.</p> <p>300' frontage on buffer; building height no more than 36'.</p> <p>Same as Alt. 2, except do not use purchase to reduce visibility of existing structures.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 4**

ISSUE	ALTERNATIVE 4
GOAL OF ALTERNATIVE	Minimize Effects on Private Landowners While Providing Minimum Protection and Enhancement of Outstandingly Remarkable (OR) and Other Important River Values.
BOUNDARIES	Establish boundary that protects view from river, generally between 200' and 400' on each side, except at Husum, recommend reclassification to "Recreational" and reduce width of boundary to about 100' (approximately 81 acres/mile - average about 335' from river on each side.) Total acres = about 626.
ADMINISTRATION	Joint County/Forest Service management under co-op agreement; advisory committee as in Alt. 2.
ACQUISITION	Rely heavily on County Shoreline Master Plan (SMP) to protect shorelines (200' on each side of river); acquire fee title or scenic easements to supplement SMP where needed to protect OR values and provide public recreation facilities. Land already acquired by F.S., which is outside the boundary, will be disposed of.
INSTREAM RESOURCES INSTREAM FLOWS STREAM CHARACTER WATER QUALITY FISHERIES	Establish minimum flows at a level which protects OR values, (whitewater recreation, resident fishery, and gorge hydrology). Utilize existing state processes. Construct a gauge at Husum to indicate water levels. Same as Alt. 3, except allow new structures that don't affect river values; allow limited removal of woody debris for river runner safety and protection of private property. Monitor and coordinate with state to enforce existing non-degradation policy. Same as Alternative 2.
BIOLOGICAL DIVERSITY LEVEL OF PROTECTION INVENTORIES SPECIES INTRODUCTION	Maintain habitats for federal and state listed threatened, endangered, and sensitive plant and animal species and management indicator species (pileated woodpecker and cavity excavator species). Maintain rare or especially significant ecological communities such as canyon ecosystems, riparian habitat, and wetlands. Before any project is initiated within the boundaries, perform an inventory of the project area to discover any of the categories listed in Alt. 3 which might be affected by the project. Prevent introduction of plant or animal species unless a study shows that there will be no serious adverse direct or indirect effects as a result of the new species, agricultural crops excluded.
CULTURAL RESOURCES INVENTORY EVALUATION PROTECTION/ACQUISITION INTERPRETATION/ENHANCEMENT	Same as Alt. 3, except no oral history. Same as Alternative 2. Acquire highest priority significant cultural sites if needed to protect them from current or impending adverse effects. Interpret only significant sites, either on- or off-site.

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 4 (continued)**

ISSUE	ALTERNATIVE 4
<p>RECREATION WHITEWATER BOATING Experience Opportunities</p> <p>Safety</p> <p>River Access</p> <p>INTERPRETATION/INFORMATION</p> <p>OTHER RECREATION FACILITIES Developed Sites</p> <p>Trails</p>	<p>Provide a "roaded-natural" boating experience (moderate perceptions of crowding and moderate levels of naturalness). Use the LAC process as in Alt. 3. If less intrusive management actions are unsuccessful at maintaining standards, limit use levels by implementing a permit system which freezes use at the levels at which the standards are reached. Allocate use equally between commercial and private boaters (50/50 split), with a transition period which is as equitable to each group as possible. Award operating (special use) permits to commercial outfitters through a prospectus procedure where a limited number of outfitters are selected based on public need, economic viability, and qualifications of operators. Distribute permits equally among selected outfitters. Limit motorized watercraft to Northwestern Lake and below.</p> <p>Same as Alternative 3.</p> <p>Same as Alternative 3.</p> <p>Same as Alt. 3, except provide information on additional recreation opportunities within and adjacent to the boundary (e.g., interpretive trails, picnic areas).</p> <p>Same as Alt. 3, plus assure that two picnic sites, one above and one below Husum (possibly at RM 9.6, the old Hearn Homestead and RM 6.5, Spring Creek), are accessible to the public from the river. Road access to these sites allowed only for maintenance.</p> <p>Construct a few short trails to specific points of interest. Prevent off-road use of vehicles within the boundary, except for necessary agricultural or forestry uses.</p>
<p>UPLAND RESOURCES CHARACTER AND SCENERY OF THE RIVER</p> <p>ROADS AND BRIDGES</p> <p>GRAZING</p> <p>AGRICULTURE (Including Orchards) Within Buffer</p> <p>Outside Buffer</p> <p>FORESTRY Within Buffer</p> <p>Outside Buffer</p>	<p>Same as Alt. 3, except buffer width is 100 feet.</p> <p>Assure that the visual impact of new activities and developments outside the buffer are not substantially visible as seen from the river. VQO is partial retention.</p> <p>Same as Alt. 3, except new roads may be seen from the river but must not be substantially visible.</p> <p>Same as Alt. 3, except grazing plans need only be required for riparian areas and wetlands.</p> <p>Same as Alt. 3 except the buffer is 100' from the OHWM.</p> <p>Allow up to 25% of existing timbered areas to convert to agricultural uses on the east side of the river above Husum and on the west side of the river below Husum. Behind buffer, limit length of unbroken new agricultural clearings visible from the river to 200 contiguous feet.</p> <p>Same as Alt. 2 except the buffer is 100' from the OHWM.</p> <p>Prevent timber harvest in canyon ecosystems, riparian habitats, and wetlands. Design forestry practices so they are not substantially visible from the river.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 4 (continued)

ISSUE	ALTERNATIVE 4
<p>UPLAND RESOURCES (cont) RESIDENTIAL AND COMMERCIAL DEVELOPMENT <i>Outside Rural Centers - Within Buffer</i></p> <p><i>Outside Rural Centers - Outside Buffer</i></p> <p><i>Inside Rural Centers - Within Buffer</i></p> <p><i>Inside Rural Centers - Outside Buffer</i></p>	<p>No new residential or commercial development, including septic drainfields, within 100' of OHWM.</p> <p>Allow an average of up to 4 residences on each side of the river per river mile, clustered on the least productive soils. No individual lot can be smaller than 2 acres, there must be a minimum of 200' frontage on the buffer, and building heights must be no more than 30'. Encourage County to strengthen Resource Lands Zone to provide a minimum average density of 1 residence per 10 acres throughout the corridor, 90% minimum open space in all land divisions, and no redivision.</p> <p>New development must not be substantially visible from the river. Blend new structures into the environment, as seen from the river, Highway 141, Husum, and BZ Corner, by retaining screening vegetation, and using appropriate materials and colors.</p> <p>No new residential or commercial development, including septic drainfields, within 100' of OHWM.</p> <p>Encourage County to limit expansion of the rural centers of Husum and BZ Corner to 100 acres outside the buffer. Maintain 85 acres for residential use.</p> <p>Limit density in commercial core to 4 units/acre with 60' minimum lot width. Limit density in residential area to 2 units/acre with 100' minimum lot width.</p> <p>200' frontage on buffer; building height no more than 30'.</p> <p>Blend new structures into the environment by retaining screening vegetation, and using appropriate materials and colors.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 5**

ISSUE	ALTERNATIVE 5
GOAL OF ALTERNATIVE	Same as Alt. 4, and in Addition, Provide for a High Level of Recreation Use.
BOUNDARIES	Same as Alt. 4, but wider where needed to include recreation facilities (approximately 150 acres/mile - average about 625' from river on each side). Total acres = about 1,168.
ADMINISTRATION	Recommend designation as State Scenic River. Cooperative management committee under State program including Forest Service.
ACQUISITION	Same as Alt. 4, but acquire more land in fee title for recreation sites.
INSTREAM RESOURCES INSTREAM FLOWS	Same as Alternative 4.
STREAM CHARACTER	Same as Alternative 4.
WATER QUALITY	Same as Alternative 4.
FISHERIES	Same as Alt. 2, except recommend to the Washington State Dept. of Wildlife to prohibit fishing between Buck Creek and Gilmer Creek.
BIOLOGICAL DIVERSITY LEVEL OF DIVERSITY	Maintain habitats for federal listed threatened, endangered, and sensitive plant and animal species.
INVENTORIES	Same as Alt. 4. except only inventory for federally listed threatened and endangered species.
SPECIES INTRODUCTION	Same as Alternative 4.
CULTURAL RESOURCES INVENTORY	Same as Alt. 1, except inventories performed under Forest Service direction. Survey areas for public recreation development prior to acquisition.
EVALUATION	Evaluate sites in response to project proposals. Encourage recreation use of sites where compatible with cultural values.
PROTECTION/ACQUISITION	Acquire cultural sites only for multi-resource objectives, except do not acquire where cultural values would be adversely affected.
INTERPRETATION/ENHANCEMENT	Interpret sites/uses only in conjunction with existing or planned recreation facilities. Encourage appropriate re-use of historic sites.
RECREATION WHITEWATER BOATING Experience Opportunities	Provide a "roaded-natural" boating experience (moderate to high perceptions of crowding and moderate naturalness). Use LAC process as in Alternatives 3 and 4. If less intrusive management actions are unsuccessful at maintaining standards, limit use levels by implementing a permit system which freezes use at the levels at which the standards are reached. Issue permits to individuals or groups under a "freedom of choice" system, where permit holders choose among commercial outfitters operating under special use permits (awarded to all commercial outfitters who meet performance, safety, and liability standards) or float the river without guide services.

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 5 (continued)

ISSUE	ALTERNATIVE 5
<p>RECREATION (cont) WHITEWATER BOATING (cont) Safety</p> <p>River Access</p> <p>INTERPRETATION/INFORMATION</p> <p>OTHER RECREATION FACILITIES Developed Sites</p> <p>Trails</p>	<p>Same as Alternative 3.</p> <p>Same as Alt. 3 except allow more than two cable launch sites and an expanded take out site near the head of Northwestern Lake if needed to accommodate approved use levels.</p> <p>Same as Alt. 4, except provide information which emphasizes additional recreation opportunities within and adjacent to the boundary.</p> <p>Same as Alt. 4, except provide public road access to the picnic sites and, in addition, provide large picnic sites at BZ Corner and Husun. Provide one public campground (possibly at Spring Creek) which is accessible to the public from the road and is not visible from the river.</p> <p>Develop an extensive trail system, including trails paralleling the river between BZ Corner and RM 9.6 (the old Hearn Homestead) and between Buck Creek and Spring Creek. Construct a trail in the Rattlesnake Creek area to provide a link in the County trail system. Allow off-road use of vehicles within the boundary, outside the buffer.</p>
<p>UPLAND RESOURCES CHARACTER AND SCENERY OF THE RIVER</p> <p>ROADS AND BRIDGES</p> <p>GRAZING</p> <p>AGRICULTURE (Including Orchards) Within Buffer</p> <p>Outside Buffer</p> <p>FORESTRY Within Buffer</p> <p>Outside Buffer</p>	<p>Same as Alt. 3, except buffer width varies between 50 and 150 feet, depending on topographic breaks and screening vegetation as seen from the river. Within a community center, provide a 50' buffer.</p> <p>Same as Alt. 4, except new activities and developments outside the buffer must not be visually dominant as seen from the river. VQO is partial retention.</p> <p>Same as Alt. 4, except new roads must not be visually dominant as seen from the river.</p> <p>Prohibit grazing in developed recreation sites. Require grazings plans for riparian areas, wetlands, and the buffer.</p> <p>Same as Alt. 3 except the buffer is 50' to 150' from the OHWM.</p> <p>Allow up to 25% of existing timbered areas to convert to agricultural uses.</p> <p>Same as Alt. 2 except the buffer is 50' to 150' from the OHWM.</p> <p>Prevent timber harvest in canyon ecosystems, riparian habitats, and wetlands. Design forestry practices so they are not visually dominant as seen from the river.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 5 (continued)

ISSUE	ALTERNATIVE 5
<p>UPLAND RESOURCES (cont) RESIDENTIAL AND COMMERCIAL DEVELOPMENT</p> <p><i>Outside Rural Centers - Within Buffer</i></p> <p><i>Outside Rural Centers - Outside Buffer</i></p> <p><i>Inside Rural Centers - Within Buffer</i></p> <p><i>Inside Rural Centers - Outside Buffer</i></p>	<p>No new residential or commercial development, including septic drainfields, within buffer which varies from 50' to 150' on each side of the river.</p> <p>Same as Alternative 3, except density would be a minimum of 10 acres within the boundary per residence with a minimum frontage of ¼ mile on the buffer, and a maximum building height of no more than 30'. Encourage County to strengthen the Resource Lands Zone as in Alt. 4.</p> <p>New development must not be visually dominant as seen from the river. Blend new structures into the environment by retaining screening vegetation, and using appropriate materials and colors.</p> <p>No new residential or commercial development, including septic drainfields, within 50' of OHWM.</p> <p>Encourage County to limit expansion of the rural centers of Husum and BZ Corner to 150 acres outside the buffer. Maintain 125 acres for residential use.</p> <p>Same as Alternative 4.</p> <p>100' frontage on buffer; building height no more than 30'.</p> <p>Same as Alternative 4.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 6 - PREFERRED

ISSUE	ALTERNATIVE 6 (Preferred)
GOAL OF ALTERNATIVE	Meet the intent of the Wild and Scenic Rivers Act for a Scenic river by maintaining the current character of the river area and providing long-term protection and enhancement of its outstandingly remarkable values, without unduly limiting other uses (including private land uses) that do not substantially interfere with public use and enjoyment of the river's values.
BOUNDARIES	<p>Use existing boundaries to the extent compatible with the following criteria:</p> <ol style="list-style-type: none"> 1. adequately protect and enhance the river's outstandingly remarkable (OR) values; 2. maintain the existing predominantly natural appearance of the riverside, as seen from the river; 3. include some land with primary stands of Oregon white oak, mature and overmature vegetation communities, and other significant river-related biological resources; 4. be easily recognizable on the ground or be easily surveyed; and 5. not include any more land than is needed to meet the above criteria. <p>(approximately 244 acres/mile - average about 1,000' from river on each side). Total acres = about 1,875. Include adjacent lands within the boundary in the future if requested by the landowner and if the lands significantly contribute to values specifically identified in this plan for protection or management.</p>
ADMINISTRATION	<p>Prior to designation of the upper river, the Forest Service, Columbia River Gorge National Scenic Area will take the lead, but will consult frequently with a task force made up of one representative from each of the following agencies, organizations, or groups: Klickitat County, WA Department of Wildlife, WA Department of Ecology, Pacific Power, Yakima Indian Nation, Klickitat-Cascade Mid Columbia River Council, non-farm local (within the boundary) landowners, local commercial agricultural landowners, Friends of the White Salmon, commercial river guides, Washington Environmental Council, the commercial launch-site operator, and a private boating club. If the upper river is designated, revise this plan as needed to comply with congressional direction, or address administration of the river as a whole. Maintain a "river ranger" position whose responsibilities include providing information to users about safety, private lands, low-impact use, etc., checking on special use authorization compliance, monitoring social and physical conditions at the put-ins, take-outs, and along the river, etc.</p> <p>Work with Klickitat County and the state to implement a process where they notify the Forest Service of applications for development activities within the boundary, require biological or archeological surveys to be done if needed (at Forest Service expense), and provide time in their review process for the Forest Service to perform the needed surveys and consultations with the landowner. Develop a joint educational program with the state and county to inform residents and other interested groups and individuals about all the requirements which affect lands within the boundary. Coordinate with state and county agencies to make administration of the river as simple for residents and users as possible. Review this plan within 10 years of approval, using a public process, and revise or amend as needed.</p>
ACQUISITION	<p>Develop a program of incentives to encourage private landowners to voluntarily meet the direction in this management plan.</p> <p>Encourage the formation of a land trust.</p> <p>If necessary, acquire fee title and scenic easements to maintain the current character of the river area and to protect the outstandingly remarkable (OR) values and other important river values, as funds are available. Priorities for acquisition will be:</p> <ol style="list-style-type: none"> 1) Exchange for all SDS Lumber Company lands within the boundary; 2) Maintain free-flowing character and water quality; 3) Protect and enhance OR values; 4) Acquire rights within the buffer which are needed in order to implement this alternative; 5) Achieve other management objectives specifically identified in the plan.

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 6 - PREFERRED (continued)

ISSUE	ALTERNATIVE 6 (Preferred)
ACQUISITION (continued)	Develop an overall acquisition plan so landowners are informed and acquisition can be started early rather than waiting to react to project proposals. Request Congress to authorize 385 additional acres of fee acquisition within the boundary (150 acres per river mile) since the exchange with SDS Lumber Company would bring the amount of acquisition to the maximum allowed in the Wild and Scenic Rivers Act. Do not use condemnation unless needed as a last resort, after all other measures have failed, and only to prevent serious adverse effects to the river area, or to establish value when the Forest Service and a willing seller cannot agree on price (friendly condemnation).
INSTREAM RESOURCES INSTREAM FLOWS STREAM CHARACTER WATER QUALITY FISHERIES	<p>Work towards establishing instream flows at existing levels in order to protect the outstandingly remarkable values (whitewater recreation, resident fish, and the gorge hydrology) preferably using State processes. Install a gauge for measuring water levels in the Husum area which is readable from near Highway 141. Assure that daily water-level information can be obtained on a call-in basis.</p> <p>Deny consent to the issuance of any Federal license, permit, or other authorization for a federally assisted water resources project that would have a direct and adverse effect on the values for which the river was designated. To the extent consistent with maintenance of a free-flowing river, utilize the existing State Department of Wildlife hydraulics permitting process for any work below the ordinary high water line that will use, divert, obstruct, or change the natural flow or bed of the river. Reduce intrusion of existing structures; allow new structures or modifications that don't adversely affect river values. Allow limited removal of woody debris for river runner safety and protection of streambanks after an analysis concludes that wild and scenic river values would be protected. Sponsor an annual river clean-up aimed at litter and debris that is in, may move into, or is visible from the river. Develop a protocol between the Forest Service and Klickitat County to insure that litter regulations are adequate and enforced. Keep historic river-related structures for interpretive purposes.</p> <p>Monitor water quality through a cooperative monitoring program developed with Washington Department of Ecology (DOE) and Underwood Conservation District. If existing water quality meets or exceeds State water quality standards, assist DOE in enforcement of the existing State non-degradation policy. If existing water quality does not meet State water quality standards, cooperate with DOE and the Underwood Conservation District to improve water quality through a technical assistance program. Coordinate state, county, health district, Underwood Conservation District, Soil Conservation Service, Forest Service, and landowners in assuring adequate septic system design, setbacks, and maintenance, and in improving practices if they are currently degrading water quality and quantity.</p> <p>Cooperate with the Wash. State Dept. of Wildlife in fish protection projects and fish population monitoring. Recommend the adoption of strong harvest regulations to protect resident fish populations, including such things as catch and release, barbless hooks, no bait, restricted seasons etc. Assure that there is no degradation of fish habitat. Provide input during the sub-basin planning process and Condit Dam relicensing process to assure that wild and scenic river values are protected in decisions affecting anadromous fish reintroduction. If it is decided to reintroduce anadromous fish above Condit Dam, amend or revise the Management Plan using the task force.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 6 - PREFERRED (continued)**

ISSUE	ALTERNATIVE 6 (Preferred)
<p>BIOLOGICAL DIVERSITY LEVEL OF PROTECTION</p> <p>INVENTORIES</p> <p>SPECIES INTRODUCTION</p>	<p>Maintain or enhance levels of biological diversity which presently exist within the boundary by: 1) maintaining or enhancing habitats of plant and animal species on the Region 6 Sensitive Species List which are known or suspected to exist within the wild and scenic river boundary; 2) maintaining or enhancing habitats of management indicator species for mature and overmature successional stages (pileated woodpecker); and 3) by protecting the following specifically identified special plant communities within the buffer and on federal lands: old-growth communities, replacement old-growth stands, canyon ecosystems, riparian habitat, and wetlands. Use vegetation management (including timber harvest) where needed to perpetuate specifically identified white oak communities on federal lands, assuring the presence of mature and old-growth stands while still providing for diversity of age classes and tree species mixes in the White Salmon River valley. (See map in Chapter III for location of corporate timber lands, most of which are identified to become federally owned through an exchange with SDS Lumber Company.)</p> <p>Before any new ground disturbing activity (development, forest practice, agricultural practice, etc.) is initiated within the boundaries on lands on which any species on the Region 6 Sensitive Species List is likely to be present, perform an on-the-ground inventory of the proposed development area to discover any such species. (See Administration Issue for requested changes in county project review process.) On lands identified to become federally owned, and within the buffer, perform biological inventories as soon as possible to assist in developing specific management direction for each area, and to discover any new plant or animal communities of special concern.</p> <p>Undertake studies within the White Salmon River valley and other appropriate valleys in the region, to determine whether biological diversity is an outstandingly remarkable (OR) value of the wild and scenic river area of the White Salmon River valley, and, if it is, what specific aspects of biological diversity can be effectively protected through National Wild and Scenic River management. Until the determination of whether biological diversity is an OR value has been made, manage the buffers and all federal lands within the boundary as if biological diversity is an OR value.</p> <p>Prevent introduction of non-native plant or animal species that could adversely affect existing native plants and animals. Exceptions are agricultural crops and species introduced under an approved integrated pest management plan.</p>
<p>CULTURAL RESOURCES INVENTORY</p> <p>EVALUATION</p>	<p>As soon as possible, compile a comprehensive and systematic oral history and archival inventory (search of literature and unpublished records) of all sites, including traditional & spiritual uses, within the White Salmon River drainage. Perform on-the-ground surveys on all public lands within the boundary. On private lands within the boundary, perform on-the-ground surveys, at Forest Service expense, on areas with moderate to high probability of containing cultural resources in response to project proposals (See Administration Issue for requested changes in county and state project review process).</p> <p>Using existing program eligibility criteria and guidelines, evaluate cultural sites identified in the inventories (historic, prehistoric, spiritual, and other areas of traditional uses) for significance. Sites which are determined to be significant are outstandingly remarkable values.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)**ALTERNATIVE 6 - PREFERRED (continued)**

ISSUE	ALTERNATIVE 6 (Preferred)
CULTURAL RESOURCES (continued) PROTECTION/ACQUISITION INTERPRETATION/ENHANCEMENT	<p>For each site which is significant, develop a plan that assures its protection. Monitor significant sites. Prioritize threatened significant cultural sites for acquisition (by Forest Service, Bureau of Indian Affairs, Yakima Indian Nation, State of Washington, Klickitat County, private conservation organizations, etc.).</p> <p>Develop an overall interpretive plan that addresses both on- and off-site interpretation for all types of cultural sites represented within and adjacent to the river boundaries. Include an off-site interpretive facility for public information and education in Husum. Facilitate traditional use of the longhouse site which has been determined to be an OR value.</p>
RECREATION WHITEWATER BOATING Experience Opportunities	<p>Provide a "roaded natural" social experience (low to moderate perceptions of crowding) in a physical setting adjacent to the river which is managed as "semi-primitive" (moderate to high perceptions of naturalness and isolation). Exempt "Husum days" from crowding requirements as well as other specific events permitted in the future on a case-by-case basis to be determined by the Forest Service. Assure that events are run so that commercial outfitters/guides are able to operate on "event" days.</p> <p>Limit motorized watercraft to Northwestern Lake.</p> <p>Use a Limits of Acceptable Change (LAC) process, which includes a balanced task group consisting of members of the commercial and private boating communities and others interested in the use of the River, to establish indicators and standards for acceptable social and physical conditions. Monitor social and physical conditions as part of the LAC process and focus, as a minimum, on the following indicators:</p> <ol style="list-style-type: none"> 1. The number of watercraft waiting to portage Husum Falls. 2. Forced waiting time at Husum Falls. 3. Waiting time at the take-out. 4. Percent of time other parties are seen along the river. 5. Perceptions of crowding along the River, at Husum Falls, and the take-out. 6. Reported accidents, safety complaints, and "near misses." 7. Conflicts with other users of the river corridor (landowners and land-based recreationists). 8. Deterioration of sites where boats are landing (human waste, exposed soil, damaged vegetation, litter, etc.) <p>In addition, monitor the following to determine the relationship, if any, between them and the indicators:</p> <ol style="list-style-type: none"> A. Party size of each launch. B. Number of watercraft by type (commercial, private, raft, kayak, etc.) for each party. C. Elapsed time for each launch, and the interval between launches. D. Forced waiting time at the launch site. <p>Determine perceptions of river crowding, and user preferences for various management actions which could be used to alleviate problems and concerns, through current user surveys and questionnaires. Annually review the monitoring and survey results with the Task Force. At least annually, schedule a meeting with representatives of the various groups using the river.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 6 - PREFERRED (continued)

ISSUE	ALTERNATIVE 6 (Preferred)
<p>RECREATION (continued) WHITEWATER BOATING (continued) Experience Opportunities (continued)</p>	<p>Maintain social and physical conditions within the desired standards through information, education, voluntary actions, self-registration, or other relatively unobtrusive management actions. If these methods fail to keep the standards from being exceeded, limit use to a level at which the standards are not exceeded using a method which meets the following criteria:</p> <ol style="list-style-type: none"> 1. Each person who wants to boat the river, whether with a commercial outfitter/guide or as a private boater, will have an equal opportunity to boat the river. 2. Use will be distributed during time periods when social standards are expected to be exceeded by scheduling launches at predetermined intervals and limiting the number of watercraft and people per launch, rather than establishing a permit system. 3. A portion of the total use will be available for "walk-ins" (people who decide to boat the river within 48 hours of the time they make the trip), whether they are private boaters or people who want to boat the river with a commercial outfitter/guide. The portion available for this group will be proportionate to the size of this group compared with all the people who desire to boat the river (approximately $\frac{1}{4}$ to $\frac{1}{3}$ in 1990). (For example: a number of launch slots could be reserved for private "walk-ins" and commercial "walk-ins", the number of each being proportionate to demand. Distribution of the commercial "walk-in" use among the commercial outfitters/guides could be based on use ratios occurring during the preceding 3-year period.). <p>Permits Do not establish a permit system unless non-permit methods for managing use which meet the above criteria are unsuccessful in practice, and, based on an analysis, it is concluded that a permit system is the only way to maintain acceptable conditions. If a permit system does become necessary, use the first criterion, above, as a goal, and establish some form of a "freedom of choice" permit system.</p> <p>Issue commercial special use permits to a total of 10 commercial outfitters/guides based on historical use, performance, and geographic distribution. If, when this plan is approved, there are more than 10 commercial outfitters/guides under permit, do not issue any more permits, and reduce the number of permittees to 10 through attrition.</p> <p>Safety Develop a safety plan with county, state and federal participation. Negotiate agreements with landowners for access to the river at key locations for search and rescue operations. Provide a warning sign at Husum Falls and improvements of the portage trail which create a safe trail surface using natural materials. Coordinate with state and county to reduce highway hazard at Husum. Use the special use permit system to ensure that commercial operators are qualified, insured, have the necessary safety equipment, and have been adequately trained in first aid and river rescue. Implement a mandatory self-registration system for private boaters to ensure that they are exposed to safety information and the need for proper safety equipment. Develop a protocol between the county, state, and Forest Service that addresses intoxication and use of life jackets on the river, discharging firearms across the river, and local availability of rescue expertise and equipment.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 6 - PREFERRED (continued)

ISSUE	ALTERNATIVE 6 (Preferred)
<p>RECREATION (continued) WHITEWATER BOATING (continued) River Access</p>	<p>Do not increase existing capacity. Limit commercial cable launch sites at BZ Corner to a maximum of two, only one of which provides public access. Assure that facilities providing public access are safe, reasonably priced, and provide good public service, preferably through cooperation with the owner/operator of the launch. No more private launch facilities. Cooperate with Pacific Power to assure a public take-out at the head of Northwestern Lake. At Husum Falls, do not provide improvements unless needed for safety or to prevent resource damage at the take-out above the falls, the portage, and the put-in below the falls. Provide a put-in near Rattlesnake Creek. Improvements are to be "rustic," not visually intrusive, and should not increase boating capacity nor encourage more use. Accessibility for persons with disabilities will be at challenge level 3 ("most difficult" - totally unmodified for people with disabilities), except at the put-in near Rattlesnake Creek and the takeout at Northwestern Lake, it will be at challenge level 2 ("more difficult" - usable by the more athletic person with a disability without assistance, but generally, a person with limited mobility would only be able to use the site with difficulty or with assistance).</p>
<p>INTERPRETATION/INFORMATION</p>	<p>Continue to provide river map/guide at BZ Corner put-in, Husum Falls, and the take-out at Northwestern Lake. Add information which would: 1) address private land ownership (stressing no trespassing and low impact on private lands from littering, noise, etc.); 2) encourage low-impact recreation and protection of resource values; 3) address boating skill levels, safety concerns, portaging Husum Falls, procedures at the take-out, and respect for other user groups; and 4) provide information about other recreation opportunities, and encourage additional recreation use to take place, outside the boundary. Assign a knowledgeable person to be present along the river at busy times to provide safety information, answer questions, etc. Provide interpretation/education opportunities and trails at points of interest, such as the falls above the launch site, Spring Creek, the conifer/oak stands along Oak Ridge Rd., the launch site, the take-out, and possibly a facility in the Husum area. Develop an off-river environmental education program and interpretive trail in conjunction with the white oak management and old growth area on the eastside of the river above Husum. Provide for interpretation of historic structures along the river, e.g. the old water turbine.</p>
<p>OTHER RECREATION OPPORTUNITIES Dispersed Areas</p> <p>Trails</p>	<p>Provide "roaded natural" recreation opportunities on federal lands. Do not encourage use of federal lands. Obliterate roads on federal lands which are not needed for administrative purposes. Gate if necessary. On federal lands, monitor interactions and conflicts between whitewater users and other river users, and monitor lands for resource damage. If these become significant, institute measures to control conflicts and damage, including use restrictions, if necessary (because it is an outstandingly remarkable value, whitewater boating is the priority use if conflicts arise with other recreationists). Cooperate with landowners to discourage recreationists from trespassing, littering, and committing acts of vandalism, or other activities which conflict with private landowners' rights.</p> <p>Construct some short trails to specific points of interest (Spring Creek and the "40"). These trails are primarily for natural resource interpretation, so they will be loops which are located away from the river, and do not provide access to it. Close trails to commercial use. Do nothing to encourage use on the old road which parallels the river near the Hendrix Homestead, such as providing parking, publicizing, or locating it on maps. Provide for and assist in development of a short trail from the public launch site in BZ Corners to the falls upstream. Cooperate with Washington Department of Transportation to develop a bicycle path along Highway 141 between Husum and BZ Corners.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 6 - PREFERRED (continued)

ISSUE	ALTERNATIVE 6 (Preferred)
<p>RECREATION (continued) OTHER RECREATION OPPORTUNITIES (continued) Developed Sites</p> <p>UPLAND RESOURCES CHARACTER AND SCENERY OF THE RIVER</p>	<p>Assure that parking, sanitation, picnic facilities, and river viewpoints are available to the public, in appropriate amounts, at the put-ins and take-outs at BZ Corner, Husum, and Northwestern Lake. Assure that two picnic sites, one above and one below Husum (probably at RM 9.6, the old Hendrix (Hearn) Homestead and RM 6.5, Spring Creek), are accessible to the public from the river. Allow road access to these sites only for maintenance. Improvements are to be "rustic" and not visually intrusive. Do not provide a developed campground within the boundary.</p> <p>On each side of the river, provide a buffer of generally undisturbed natural vegetation in which there are no new residential or commercial developments, including septic system drainfields and signs, or other new development activities, except for safety and recreation facilities approved in this plan. Outside the rural centers (BZ Corner and Husum) the purpose of the buffer is to protect water quality, protect diversity of plant and wildlife communities, provide for wildlife movement along the river, and prevent significant visual intrusion of new residential, commercial, timber management, agricultural, or other development activities on the river. The buffer outside the rural centers will extend to a point 200' from the ordinary high water mark (OHWM) on each side of the river. Within the rural centers, the purpose of the buffer is to protect water quality and prevent significant visual intrusion of new residential, commercial, timber management, agricultural, or other development activities on the river. In BZ Corner, the buffer will extend to a point 20' beyond the rim of the gorge, not exceeding 200' from the OHWM on each side of the river. In Husum, the buffer will extend to a point 100' from the OHWM on each side of the river. Do not affect existing uses, such as agriculture, residences, picnic sites, trailer sites, etc., unless they are causing adverse effects and landowners consent to modifying these uses. Do not manipulate vegetation in the buffer unless needed to manage crops in existing agricultural fields or orchards, to maintain other existing uses, for safety, to protect property, to reduce serious fire hazards, to provide minimal filtered views to the river from residences, to create biological diversity, to construct approved recreation facilities, to control noxious weeds or the buildup of harmful insects or diseases (consistent with maintaining biological diversity), or to otherwise maintain or enhance desired national scenic river characteristics.</p> <p>Except in Husum, assure that all new activities or developments within the boundary are not evident, as seen from the river (the visual quality objective [VQO] is retention). In Husum, new activities or developments outside the buffer, but within the boundary, may be evident as seen from the river, but not visually dominant (the VQO is partial retention). In addition, assure that activities carried out on federal lands meet the VQO of retention as seen from Highway 141, Oak Ridge Road, and trails. Exceptions to the VQOs are where recreation facilities called for in this plan cannot be built and still meet the VQO, in which case, the facility must be designed to harmonize with the environment to the extent practicable.</p> <p>Encourage landowners to reduce visibility of existing structures, as seen from the river, with vegetative screening, color change, change in materials, etc., and provide technical assistance as appropriate.</p> <p>Contact the U.S. Air Force, the U.S. Navy, and the Federal Aviation Administration to attempt to reduce any adverse effects of the low altitude Military Training Route located in the White Salmon River corridor.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 6 - PREFERRED (continued)

ISSUE	ALTERNATIVE 6 (Preferred)
UPLAND RESOURCES (cont) ROADS AND BRIDGES	<p>Allow no new roads in the buffer and no new bridges over the White Salmon River. New roads within the boundary must not be visible from the river. Construct and treat roads so there is no erosion which enters the river. Revegetate cut and fill slopes immediately. Existing roads and bridges may be maintained or replaced in the same general location.</p>
GRAZING	<p>Prevent grazing on federal lands unless needed as a tool for managing regeneration and vegetative competition in white oak stands, or for other specific uses which maintain or enhance biological diversity (federal government will build and maintain any necessary fences). Consider and mitigate long-standing livestock watering needs on lands which may be cut off from the river by lands which become federally owned.</p>
AGRICULTURE (Including Orchards) Within Buffer	<p>Prevent new agricultural clearings within the buffer. Existing agricultural uses may continue unless they adversely affect water quality. Work with the state and county to insure that pesticides and herbicides are used in accordance with state and federal regulations. Encourage the use of integrated pest management where that can be used successfully to reduce dependence on pesticides and herbicides. Provide technical assistance to landowners if needed for protection of natural resources.</p>
Outside Buffer	<p>If requested, provide assistance to the county and private landowners to maintain the rural character of the area and assure that viable agricultural opportunities continue (through technical assistance and other means which may be available). Work with the state and county to insure that pesticides and herbicides are used in accordance with state and federal regulations. Encourage the use of integrated pest management where that can be used successfully to reduce dependence on pesticides and herbicides.</p>
FORESTRY Within Buffer	<p>Do not harvest timber in the buffer unless needed for safety, to protect property, to reduce serious fire hazards, to provide minimal filtered views to the river from residences, to create biological diversity, or to otherwise maintain or enhance desired wild and scenic river characteristics. Allow area to revert to a generally natural condition.</p>
Outside Buffer	<p>Do not harvest timber on federal lands, unless active forest management is needed to maintain biological diversity, particularly to perpetuate white oak communities. Assure that all proposals that involve vegetative manipulation of tree cover for any purposes comply with the seven requirements in 36 CFR 219.27(b). Do not use clearcutting or even-aged management on federal lands. Assure that federal lands contribute to diversity of age classes and tree species mixes considering lands both inside and outside the boundary. On private lands outside the buffer, use current state and county regulations to guide forest practices, except (1) modify timber harvest activities in habitats of known populations of species on the Region 6 Sensitive Species List as necessary to prevent adverse effects to that population, and (2) design forestry practices so they are not evident from the river. Work with the state and county to insure that pesticides and herbicides are used in accordance with state and federal regulations. Encourage the use of integrated pest management where that can be used successfully to reduce dependence on pesticides and herbicides. Through technical assistance and other means which may be available, help private landowners manage their woodlands <u>if requested</u>.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 6 - PREFERRED (continued)

ISSUE	ALTERNATIVE 6 (Preferred)
<p>UPLAND RESOURCES (cont) RESIDENTIAL AND COMMERCIAL DEVELOPMENT <i>Outside Rural Centers - Within Buffer</i></p> <p><i>Outside Rural Centers - Outside Buffer</i></p>	<p>Assure that no new residential or commercial development, including septic drainfields, is located within the buffer. Purchase existing residences within the buffer, at landowner's request, based on availability of funds and priority.</p> <p>Allow some new single-family residential development, but no new commercial uses other than operating farms, orchards, home occupations, and cottage industries, (which includes intensification or enhancement of farm and forestry uses). Allow 1 new dwelling unit to be constructed on each platted lot which is less than 20 acres and currently contains no dwelling unit. Allow no new residences to be developed on lots less than 20 acres which currently contain 1 or more dwelling units. On contiguous ownership parcels larger than 20 acres allow dwelling units to be constructed so that overall density does not exceed an average of 1 residence per 20 acres. On all parcels over 2 acres, where a new dwelling unit is going to be built, assure that 95% of the land remains undeveloped and is maintained for agriculture or forest stands by concentrating new residences on the 5% of the land (or 1 acre, whichever is larger) which is least suitable for forestry or agriculture. Density within the 5% would be 1 residence per acre with a minimum frontage of 200' on the buffer. Temporary exceptions to the above density restrictions include: 1) in a hardship case, such as when an ill parent needs family care, a trailer may be temporarily moved onto the property during the period when care is being given, and 2) an existing house may be lived in while a new house is being constructed on the property, but not to exceed three years from the time construction of the new house begins. Through technical assistance and other available means, support the county in its intent for this area to provide land for present and future commercial farm and forest operations in areas possessing productive soils and other conditions suitable for the continued success of such operations.</p>

DETAILED DESCRIPTION OF ALTERNATIVES (continued)

ALTERNATIVE 6 - PREFERRED (continued)

ISSUE	ALTERNATIVE 6 (Preferred)
<p>UPLAND RESOURCES (cont) RESIDENTIAL AND COMMERCIAL DEVELOPMENT (cont) <i>Inside Rural Centers - Within Buffer</i></p> <p><i>Inside Rural Centers - Outside Buffer</i></p>	<p>Assure that new residential or commercial development, including septic drainfields, is not located within the buffer. Purchase existing residences within the buffer, at landowner's request, based on availability of funds and priority.</p> <p>If there is no community sewer system, limit density to 2 units/acre with 100' minimum lot width - new development, including septic drainfields, must be set back 200' from the OHWM. If there is a community sewer system, limit density to 4 units/acre with a setback from the OHWM of 100' or outside the buffer, whichever is greater. Support the county in its intent for the rural centers to provide for the location of small businesses and commercial services in rural areas in a way which fits into farm and rural patterns of development without creating land use or traffic conflicts. In Husum, acquire lands or interests in lands, from willing sellers, to avoid overdevelopment of the area between the river and Highway 141, and of the area along the west side of the river beginning about 500' downstream from the old bridge.</p> <p>Provide technical assistance to help communities develop sewer and water systems as well as community parks to serve river-oriented recreationists.</p>
<p>OTHER USES</p>	<p>Prevent development which would have a serious adverse effect on national wild and scenic river values, especially water quality. (See Administration Issue for requested changes in county project review process.) Allow other uses outside the buffer which promote conservation of farm and forest operations, maintenance or creation of biological diversity, and protection and enhancement of other national wild and scenic river values (such as fish and wildlife habitat improvements, watershed protection areas, hunting preserves, etc.). Prevent uses which do not promote such values (such as airports, condominiums, RV parks, airstrips, transfer stations, feed lots, hazardous waste generating facilities, gravel operations, etc.). Encourage new utility developments to locate outside the boundaries if practicable. If that is not feasible, locate and design new utility installations to have the least adverse affect on wild and scenic river values as possible.</p>

Figure II-1: **OUTPUTS AND EFFECTS TABLE**

OUTPUT OR EFFECT	UNIT	ALTER-NATIVE 1	ALTER-NATIVE 2	ALTER-NATIVE 3	ALTER-NATIVE 4	ALTER-NATIVE 5	ALTERNATIVE 6
Area Within Boundary	Acres	NA	2,464	1,881	626	1,168	1,874
Area per River Mile	Acres	NA	320	245	81	150	244
Average Width of Boundary, Each Side	Feet	NA	1,320	1,008	335	625	1,004
Probable Federal Fee Ownership	Acres	0	770	600	200	500	1,100
Probable Federal Scenic Easements	Acres	0	1,694	600	300	200	400
Total Costs to Federal Government to Implement							
Purchase - Fee Title	Dollars	0	2,697,000 ¹	2,374,000 ¹	907,000 ¹	2,986,000 ¹	1,311,000 ²
Purchase - Scenic Easements and Water Rights	Dollars	0	5,701,000	2,294,000	1,150,000	572,500	1,115,000
Facility Development	Dollars	0	340,000	475,000	530,000	1,500,000	1,000,000
Administration							
Initial One-time Costs	Dollars	0	217,000	253,000	215,000	263,000	345,000
Annual Costs	Dollars	0	241,000	271,000	274,000	307,000	293,000
Forest Land with No Harvest	Acres	0 ³	1,073	550	200	450	940
Forest Land with Limited Harvest	Acres	400 ³	300	250	165	150	50
Loss in Jobs	Jobs	0	6	4	1.5	3	5
Losses in Forest and Ag Land							
Tax Revenues	Dollars	0	-21,540	-9,680	-3,520	-7,920	-16,530
Gains in Forest Service Payments	Dollars	0	8,540	6,880	2,220	5,680	12,600
Potential Residential Property Tax Increases Foregone	Dollars	0	567,950	489,540	124,920	261,470	277,970
Potential Residences, 1-Mile Corridor Within Rural Centers							
Inside Boundary	Residences	N.A.	62	128	126	264	653
Outside Boundary	Residences	3,678	2,401	2,484	3,298	2,852	2,484
Subtotal Within Rural Centers	Residences	3,678	2,463	2,612	3,424	3,116	3,137
Outside Rural Centers							
Inside Boundary	Residences	N.A.	43	34	51	51	72
Outside Boundary	Residences	701	359	428	571	515	429
Subtotal Outside Rural Centers	Residences	701	402	462	622	566	501
TOTAL	Residences	4,379	2,865	3,074	4,046	3,682	3,638
(Subtotal Within Boundary)	Residences	N.A.	105	162	177	315	725
(Subtotal Outside Boundary)	Residences	4,379	2,760	2,912	3,869	3,367	2,913
Potential Residences, 200' of River Within Communities	Residences	99	41 ⁴	41 ⁴	99	99	77
Outside Communities	Residences	102	20 ⁴	20 ⁴	51	51	20 ²
Potential Residences Visible From Highway 141							
Within Communities	Residences	1,530	580	630	1,120	1,100	920
Outside Communities	Residences	114	65	70	114	114	70
Estimated Cultural Resource Properties Recorded and Evaluated	Properties	0	40	30	20	30	35

Figure II-1: OUTPUTS AND EFFECTS TABLE (continued)

OUTPUT OR EFFECT	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6
Water Quality Short-term (less than 10 years)	Decrease	Minor Increase	No Change	Little Change	Decrease	Little Change
Long-term ⁶ (more than 10 years)	Decrease	Decrease	Decrease	Decrease	Decrease	Decrease
Water Quantity-low flows	Decrease	Minor Increase	No Change	Minor Decrease	Minor Decrease	No Change
Resident Fish Populations Short Term (less than 5 years)	Little Change	Little Change	Small Decrease	Little Change	Moderate Decrease	Slight Decrease
Long Term ⁶ (more than 5 years)	Major Decrease	Significant Decrease	Significant Decrease	Moderate Decrease	Major Decrease	Slight Decrease
Whitewater Boating Opportunities Private	Highest	Lowest (No Increase)	Slight Increase	Moderate Increase	Substantial Increase	Moderate Increase
Commercial	Highest	Lowest (No Increase)	Slight Increase	Moderate Increase	Potential for Substantial Increase	Moderate Increase
Whitewater Boating Experience Naturalness/Remoteness	Lowest	Highest	High	Moderate	Moderate to Low	High
Solitude	Lowest	Highest	High	Moderate	Moderate to Low	Moderate to High
Safety	Lowest	Highest	High	Some Decrease Possible	Possible Decrease	High
Boating Access	Very low to high depending on private development	Moderate	Some Increase	Some Increase	Potential Substantial Increase	Some Increase
Other Developed Recreation Opportunities (Trails, Picnic Areas, Campgrounds, Etc.)	Very low to high depending on private development	Lowest	Low	Some Increase	Highest	Some Increase
Recreation Impacts to Private Property (Trespass, Litter, Fire)	Highest	Lowest	Low	Potential Increase	Potential Increase	Low

¹Assumes that all federal fee ownership would be purchased and none would be acquired by exchange.

²Assumes about 725 acres would be acquired by exchange (at no cost to the federal government).

³Under the current Klickitat County Shorelines Management Plan. However, After ten years, 100 acres would be in a no-harvest zone.

⁴Existing

⁵Predicted long-term decreases in water quality in all alternatives is a result of expected actions outside the boundary over which the Forest Service has no control. See Effects on Water Quality in Chapter IV.

⁶Predicted long-term decreases in fish populations in all alternatives is mainly a result of anticipated increases in fishing which the Forest Service does not control. See Effects on Resident Fish in Chapter IV.

RESOURCE MANAGEMENT SYSTEMS

This section includes a brief summary of systems used by the Forest Service to guide the management of important resource areas - recreation management, visual resource management, and the Region 6 Sensitive Species List. Previously, these systems were referred to in this chapter in the detailed description and comparison of the alternatives. A brief explanation of each is included here to help the reader understand the full extent and implications of the management direction.

RECREATION OPPORTUNITY SPECTRUM

INTRODUCTION

The Recreation Opportunity Spectrum (ROS) is a framework for addressing questions concerning the allocation and management of opportunities for recreation. Recreation opportunities can be defined as the combination of physical, biological, social, and managerial conditions that make certain desired experiences or outcomes possible (Clark & Stankey 1979). The purpose or goal of the recreationist is to realize satisfying experiences by participating in preferred activities in preferred environmental settings. Opportunities for achieving those satisfying experiences depend on elements provided by nature, such as: vegetation, landscape, and scenery; qualities related to recreational use, such as: levels and types of activities; and conditions provided by management, such as: developed sites, roads, and regulations.

While the recreationist wishes to obtain satisfying experiences, the goal of the recreation resource manager becomes one of providing the opportunities for obtaining these experiences. This can be done by managing the natural resource setting and the activities which occur within it.

RECREATION OPPORTUNITY SETTINGS

The ROS encompasses a variety of "recreation settings," or conditions under which certain recreation experiences are possible. Recreation

settings range from modern and developed to primitive and undeveloped, or as Nash (1973) explains, "from the paved to the primeval." Different combinations of attributes within recreation settings create opportunities for different recreation experiences.

Seven elements provide the building blocks of recreation settings. These are: access, remoteness, visual characteristics, site management, visitor management, social encounters, and visitor impacts.

Access - includes the mode of transport used within the area and influences both the levels and types of recreation use an area receives.

Remoteness - concerns the extent to which individuals perceive themselves removed from the sights and sounds of human activity. Vegetative or topographic variation can increase this sense of remoteness and the associated experiences of solitude and naturalness.

Visual Characteristics - often described in terms of "visual quality objectives," or the varying degrees of allowable alteration of the natural landscape characteristic of each ROS setting.

Site Management - refers to the level of site development. Lack of facilities and site modifications can facilitate feelings of self-reliance, independence, and naturalness, while highly developed facilities can enhance comfort and convenience and increase the opportunity to meet and interact with other people.

Visitor Management - includes both regulation and control of visitors and provides information and services to aid in their enjoyment. A continuum of visitor management actions can be described, ranging from subtle techniques such as site design and providing visitors with information, to strict rules and regulations. In some recreation opportunity settings, controls are expected and appropriate. In others, such on-site controls detract from desired experiences such as independence and self-reliance. In general,

the "principle of minimum regulation" should apply across the ROS spectrum (USDA 1982).

Social Encounters - the number and type of other recreationists met in the area, along travel ways, or camped within sight or sound. Social encounters measure the extent to which an area provides experiences, such as solitude or the opportunity for social interaction. Increasing numbers of visitors to an area changes the kind of recreational experience offered, attracts new users and may cause others to leave.

Visitor Impacts - affects resources such as soil, vegetation, air, water, and wildlife. Even low levels of recreational use can produce significant impacts, and these impacts can, in turn, influence the recreationists' experience.

RECREATION OPPORTUNITY CLASSES

Based on the seven characteristics described above and the recreation experiences they are designed to facilitate, a spectrum of six "recreation opportunity classes" has been developed. They are described below.

Primitive - characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. This class is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted. There is an extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through application of outdoor skills in an environment that offers a high degree of challenge and risk.

Semi-Primitive Non-Motorized - characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. Minimum on-site controls and restrictions are present, but subtle. Motorized use is not permitted. High probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self-reliance through the

application of outdoor skills in an environment that offers challenge and risk.

Semi-Primitive Motorized - characterized by a predominately natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other users. Minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted. Moderate probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self-reliance through the application of outdoor skills in an environment that offers challenge and risk.

Roaded Natural - characterized by predominantly natural-appearing environment with moderate evidence of the sights and sounds of people. Such evidence usually harmonizes with the natural environment. Interaction between users may be low to moderate with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities. There exists about equal probability to experience affiliation with other user groups and for isolation from sights and sound of humans. There also is an opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities associated with more primitive types of recreation are not very important. Practice and testing of outdoor skills might be important. Opportunities for both motorized and non-motorized forms of recreation are possible.

Rural - characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available. Probability for experiencing

affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. These factors are generally more important than the setting of the physical environment. Opportunities for wildland challenges, risk-taking, and testing of outdoor skills are generally unimportant except for specific activities, such as downhill skiing, for which challenge and risk-taking are important elements.

Urban - characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans, on-site, are predominant. Large numbers of users can be expected, both on-site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site. Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of site and opportunities. Experiencing natural environments, having challenges and risks afforded by the natural environment, and the use of outdoor skills are relatively unimportant. Opportunities for competitive and spectator sports and for passive uses of highly human-influenced parks and open spaces are common.

APPLYING THE RECREATION OPPORTUNITY SPECTRUM

The ROS provides a framework for stratifying and defining classes of outdoor recreation opportunity environments. However, not all recreation environments fit neatly into the defined opportunity classes. For example, the size of the lower White Salmon River corridor and the presence of roads in close proximity to the river are inconsistent with the definition of a semi-primitive opportunity class. In this particular environment, however, opportunities for recreation experiences correspond closely to those found in areas that match the semi-primitive definition more closely. Due to the nature of the river corridor, we believe these terms are still appropriate, because the corre-

sponding opportunities for certain types of **recreation experiences** are available.

THE LIMITS OF ACCEPTABLE CHANGE FRAMEWORK

The Limits of Acceptable Change (LAC) framework provides resource managers with a means for measuring impacts to physical and social environments and maintaining established standards for those environments. The process involves several steps.

PROCESS STEPS

Step 1 - issues and concerns are identified.

Step 2 - the type of recreational opportunity or desired experience is defined (see "ROS" above).

Step 3 - indicators of the physical and social conditions are identified. These are elements of the physical or social environment that can be measured and monitored, such as the amount of litter seen in an area or the number of other boating parties encountered while floating on the river.

Step 4 - an inventory of the physical and social conditions that currently exist is conducted.

Step 5 - standards are specified for physical and social conditions. Standards define the level of impact (for example, the amount of litter seen) that is acceptable before the quality of the recreation experience is degraded.

Step 6 - various management actions that can be used to maintain the standards are identified (see list below).

Step 7 - once indicators, standards and management actions are identified, then the preferred management actions are implemented and resource monitoring continues. If monitoring shows that standards are being approached or exceeded, additional or different management actions may be taken in order to maintain the desired conditions.

INDICATORS OF DESIRED RECREATION OPPORTUNITIES

During the planning process, the following indicators were identified for the lower White Salmon River:

Social Environment

- Number of encounters with other boaters on the river
- Size of parties encountered
- Waiting time at the put-in, Husum Falls portage and the take-out

Physical Environment

- Presence of litter
- Evidence of fire rings
- Soil erosion/compaction
- Damage to vegetation

Goodwill with Landowners

- Number of complaints regarding trespass and other impacts to private land

MANAGEMENT OPTIONS FOR MAINTAINING DESIRED CONDITIONS

During the planning process, the recreation work group suggested a variety of specific management options that could be used to maintain the desired resource and social conditions on the river. These specific suggestions ranged from installing bulletin boards to limiting use. For our discussion, we have listed general categories of management options, rather than reproduce the entire list of specific actions. These options are not prioritized; however, less intrusive management actions are generally tried before implementing higher levels of control. Members of the recreation work group prefer that use levels be limited only in the event that other,

less restrictive management actions prove ineffective in maintaining the desired conditions.

Public Education/Interpretation - This option includes such actions as providing information on safety, private property rights, environmental ethics, and regulations through the use of signs, brochures, on-site orientations, interpretive programs and media, self-registration systems and other programs.

Site Modification - This management option includes such actions as developing public access points, providing facilities such as picnic areas, parking and restrooms.

Cooperative Efforts - Cooperative efforts may include annual river clean-up events, voluntary staggering of launch times, and providing a forum where landowners can provide input regarding their concerns.

Regulations/Enforcement - Creating regulations and enforcing them is another technique for maintaining desired conditions; however, as mentioned in the discussion of the ROS, high levels of regulation and enforcement may conflict with the type of recreation opportunity desired.

Limiting Use - The concept of "carrying capacity" can be difficult to translate into reasonable management actions. The purpose of using the LAC framework is to define what types of resource and social conditions are necessary to provide particular recreation opportunities. This can be done through a variety of actions, and limiting opportunities is only one option. Ultimately, there may be a point where safety and resource protection cannot be maintained without limiting the number of recreationists using an area. This document presents four alternative methods for distributing use among commercial outfitters and private boaters, in the event that limits are deemed necessary.

VISUAL MANAGEMENT SYSTEM

GENERAL

The Visual Management System (VMS) is a systematic approach to inventorying and managing the visual, or scenic, resources of wildlands. It was adopted by the Forest Service in 1974 to help Forest Service managers identify the visual characteristics of the landscape and analyze, in advance, the visual effects of resource management actions.

There are several basic parts of the VMS:

1. An inventory of the degree of inherent scenic quality of the land in terms of the visual variety of the existing, naturally established, physical features.
2. An inventory of the level of concern which people have for the quality of the scenery under consideration.
3. A set of visual quality objectives (VQOs) which describe the recommended amount of acceptable change in the natural landscape. The VQOs are a function of the two inventories.

VISUAL QUALITY OBJECTIVES

There are five VQOs. These are really goal statements for the allowable degree of alteration of the visual aspects of the natural landscape caused by any management action. The degree of alteration is measured in terms of visual contrast with the surrounding natural landscape.

Preservation - The goal of this VQO is to limit visual changes in the landscape to those which are the result of ecological change only. The results of management activities, other than very low physical and visual-impact resource protection activities, would not meet this goal.

This VQO applies to Wildernesses and other areas where the management direction allows changes in the landscape to come about primarily through natural ecological processes, rather than as a result of human activities.

Retention - The goal of this VQO is that the visual results of management activities blend in with the surrounding landscape to the point of not being evident to the average visitor.

Partial Retention - The goal of this VQO is for the visual results of management activities, though evident to the average visitor, remain visually subordinate to the surrounding natural landscape.

Modification - The goal of this VQO allows the visual results of management activities to not only be evident to the visitor, but to visually dominate the surrounding natural landscape. However, the visual results of vegetation and landform alterations must be similar in appearance (form, line, color, texture, and scale) to natural visual elements which are seen in the vicinity.

Maximum Modification - This can be considered a special case of the Modification VQO. The goal is the same as for Modification, but it is not necessary to meet it except when the visual results of the management activity are seen in the background, that is, at a distance of more than 3-5 miles from the viewer.

The VQOs of retention and partial retention are the only ones which would be established in the White Salmon River area as a result of management direction contained in the various alternatives considered in this draft EIS.

REGION 6 SENSITIVE SPECIES LIST

The Regional Forester has established a list of plant and animal species called the Sensitive Species List. For the White Salmon River area, the list consists of species from the following sources:

1. Federally listed endangered, threatened, and proposed species.
2. Federal candidate (categories 1 and 2) plant and animal species published under

a Federal Register Notice of Review or contained in the U.S. Fish and Wildlife Service, Region 1, Program of Advice for preparation of listing packages.

3. Species of high concern occurring on National Forest lands that are contained in the current Washington and Oregon Natural Heritage Plans.
4. Plant and animal species recognized by Oregon or Washington State fish and wildlife agencies as endangered or threatened.

Management goals and objectives are established for the conservation of federally listed threatened

or endangered species, which will promote recovery and lead to the removal of the plant or animal species from the threatened or endangered list.

For other plant and animal species on the list, the management goals and objectives are to manage these species and their habitats to prevent a need for federal listing at a future date.

Changes in the Sensitive Species List will be necessary when the status of a species is changed by the state, the Natural Heritage Plan, or the U.S. Fish and Wildlife Service, or when the genus or species name of a listed species is changed.

IMPLEMENTATION CONSIDERATIONS

MONITORING

As the Management Plan for the Lower White Salmon Wild and Scenic River is implemented, it is necessary to check to see if the desired conditions which are intended in the plan are actually being achieved. This would be done through a monitoring program which would be similar for Alternatives 2 through 6. The monitoring plan for Alternative 6, the Preferred Alternative, is included in Section III of Appendix E, Management Plan.

SUITABILITY OF LANDS FOR TIMBER PRODUCTION

At present, there are approximately 45 acres of federal land within the existing wild and scenic river boundary. Although these lands are not part of any proclaimed national forest, they are considered to be national forest system lands. Of these acres, almost all would be capable of growing trees at a rate which would be suitable for production of commercial crops of timber. In addition to the existing national forest system

lands, each alternative, except Alternative 1, assumes that some additional acreage would be acquired and, therefore, would become national forest system lands. Most of these lands would also be capable of growing commercial crops of trees.

In all alternatives, the emphasis for lands which become part of the national forest system is to manage them so they help meet wild and scenic river objectives. In most cases, this involves protecting the scenery seen from the river and maintaining or enhancing biological diversity to the extent possible within the scope of the alternative. This does not mean that timber would never be harvested; but, if timber harvest is done, it would be for the purpose of enhancing wild and scenic river values. Timber will not be harvested on any national forest system lands in any alternative solely for the purpose of producing timber. In this situation, all national forest system lands, even though capable of timber production, are considered not appropriate for timber production and are, therefore, designated as unsuited for timber production.

ACQUISITION OF LAND OR RIGHTS

The federal government does not have authority to regulate what happens on private land without having acquired the rights to do so. Many of the goals and actions called for in the alternatives cannot be accomplished except through voluntary compliance by the landowners, technical assistance, purchase or donation of partial rights to land through a scenic easement, or acquisition of fee title to land. Therefore, the Forest Service must establish a program to gain cooperation of the landowners within the boundary to voluntarily comply with the direction in the management plan, and, where that is not possible, to acquire at market value and as funds are available, the necessary rights to meet the intent of the management plan. Generally, priorities for acquisition are to:

1. Maintain the river's free-flowing character and water quality.
2. Protect and enhance the river's outstandingly remarkable values.
3. Acquire rights within the buffer which are needed in order to implement this management plan.
4. Achieve other management objectives specifically identified in this plan.

Priorities 1 and 2 are required in the Wild and Scenic Rivers Act. However, as opportunities arise, any of the priorities may be acted on ahead of the others, but not to the point of jeopardizing accomplishment of a higher priority.

An overall land acquisition plan will be developed within one year of the date of approval of the management plan so landowners can be informed about how their properties fit into the needs for

the area within the Wild and Scenic River boundary. Acquisition of necessary properties and scenic easements will be started early, rather than waiting to react to project proposals.

The Forest Service will not use condemnation to acquire scenic easements or fee title to lands except as a last resort, after all other measures have failed, and then only to prevent imminent, serious, adverse effects to the river area. This does not preclude the use of condemnation when necessary to clear title or to establish value when the Forest Service and a willing seller cannot agree on price (friendly condemnation).

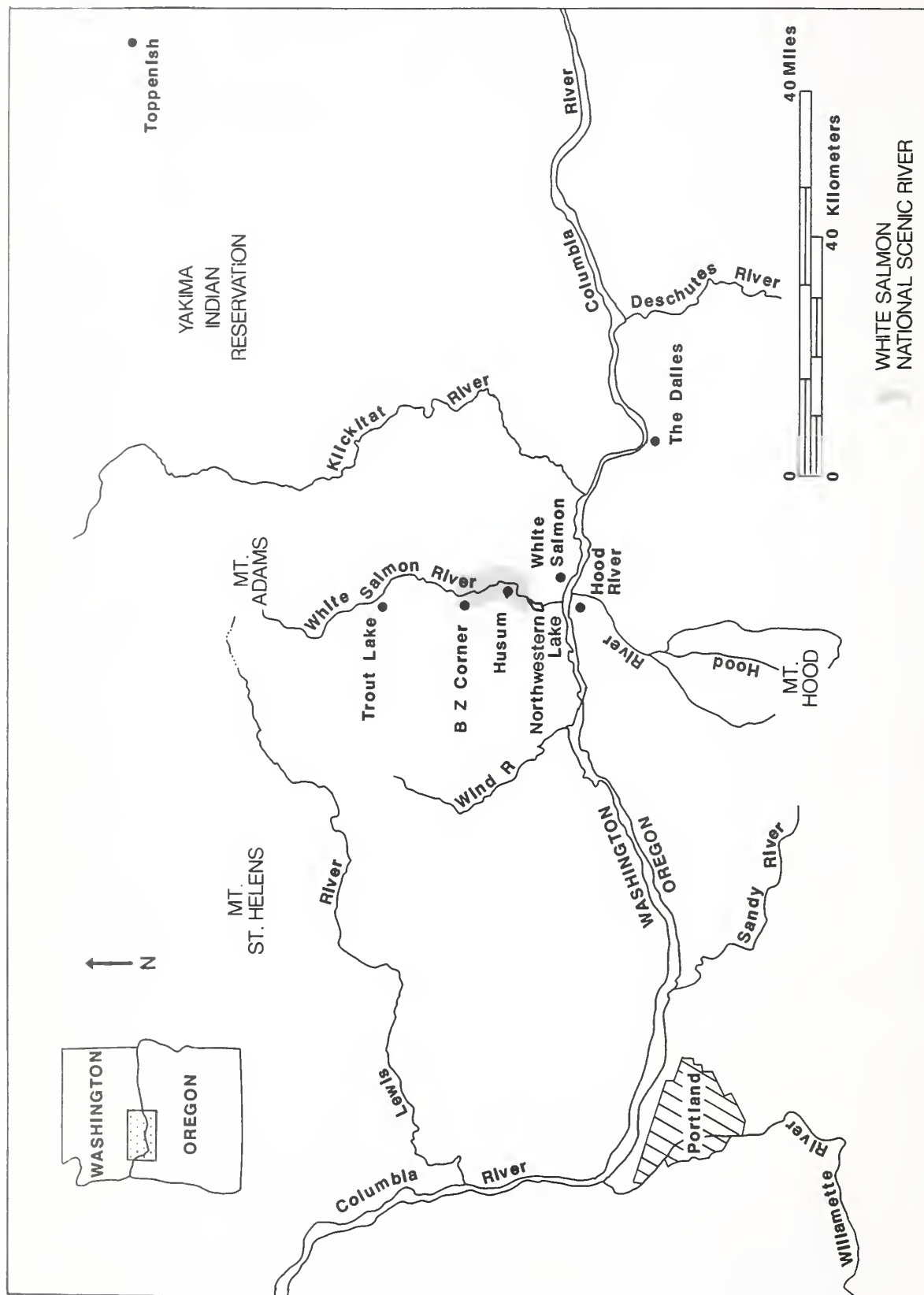
FUNDING

The projects and acquisition proposals contained in the adopted alternative will be translated into multi-year program budget proposals that identify needed expenditures. The budget proposals are submitted through normal Forest Service budget processes. A final budget for any fiscal year (October 1 of one calendar year through September 30 of the next calendar year) is the result of negotiation between the Congress of the United States and the Administration, as well as an allocation process among all the Forest Service units by the higher offices of the Forest Service.

Upon approval of a final funding level for the Columbia River Gorge National Scenic Area, the program of work for that fiscal year would be finalized and carried out. Since the actual amount of work which can be accomplished depends, to a great degree, on the final level of funding that may vary considerably from the budget proposal, it is not possible to say with assurance when or if the proposed projects and land acquisition, or the management direction, in the adopted alternative would be carried out fully.

CHAPTER III

**AFFECTED
ENVIRONMENT**



White Salmon National Scenic River and Vicinity

CHAPTER III

AFFECTED ENVIRONMENT

INTRODUCTION

This chapter describes the character and resources within a mile-wide corridor along the White Salmon National Scenic River. Current conditions, as well as existing trends, are described to acquaint the reader with the area, the issues, and to provide a basis from which to assess the consequences of various management alternatives evaluated in Chapter 4.

CHANGES BETWEEN THE DRAFT EIS AND FINAL EIS

Many changes have been made to this chapter since the Draft EIS was published. Some were caused by conditions which changed during that period. However, most resulted from comments received in response to the draft which provided new information, or from the need to get new information in order to answer a question contained in the comments. Following are the major changes which have been made:

- Many references to the Klickitat County Shoreline Management Plan were changed to reflect that a new plan had been approved.

- The status of the northern spotted owl was changed to reflect that it has been listed as a threatened species by the U.S. Fish and Wildlife Service.
- Changes were made to reflect that special use permits were now required for commercial outfitters and guides.
- The section on Plants and Animals was reorganized so its parts would be better related. Also, a number of the parts of this section were revised somewhat.
- Information on the pileated woodpecker was revised.
- Information on Oregon white oak was revised.
- Information on biological diversity was revised.
- A group of animal species has been identified which are documented or suspected to be in the White Salmon River area and are listed as candidate species on the Washington State Species of Concern List.
- The Treaty Rights discussion contained in Appendix C of the Draft has been moved to the Cultural Resources section.
- A description of the Military Training Route for aircraft was added.

REGIONAL SETTING

The White Salmon River is located in southcentral Washington, which is an extremely diverse area (refer to the Vicinity Map on the opposite page). The White Salmon River drainage is one of transition between the Cascade Mountains and the Columbia Basin, with landforms, plants and animals of both regions present. This river drainage, an area of approximately 400 square miles, is also located between the wet coastal and dry continental climates. This unique setting supports many unique plants and important

habitat for numerous animal species (Franklin and Dyrness, 1973).

The river begins on the glacial, snow-covered flanks of Mt. Adams, the second highest volcano (12,307 feet) in the Cascade Mountains. From Mt. Adams, the river flows south 45 miles to its confluence with the Columbia River. In this relatively short distance the river drops more than 7,500 feet.

View from the bridge at BZ Corner



It passes through alpine meadows, a steep and densely-forested canyon, the pastoral Trout Lake valley, a vertical-walled canyon, and oak/conifer woodlands. It then flows through the rural towns of BZ Corner and Husum, before pooling behind Condit Dam, several miles upstream from the Columbia, and forming Northwestern Lake. Above the lake, the river is essentially "free-flowing," although a half dozen small irrigation diversions exist.

The White Salmon River flows into the Columbia within the spectacular Columbia River Gorge. The Columbia River carves the only near sea-level route through the Cascade Range and is the dominant factor in the area's rich natural and cultural history.

Climate is influenced by marine air masses from the west and continental air masses from the east. Summers are warm, dry and sunny, while winters are relatively wet and mild. Fog and cloudiness occur frequently during winter as moist marine air moving up the Columbia River Gorge meets the colder continental air from the interior. Precipitation in the drainage is in the form of both rain and snow. The average annual precipitation is 40 to 50 inches in the lower

basin and over 100 inches around Mt. Adams. The frost-free period is normally from mid-April to mid-October, with January temperatures averaging 30° F and July temperatures averaging 66° F. Consistent high winds are common during the frost-free months in the Columbia River Gorge, as a result of the build-up of air pressure differences between interior and coastal air masses.

Prior to European settlement, the White Salmon River valley was almost completely forested. Early settlement began in the late 1800s with some land cleared for homesteads and farms.

During the early 1900s, a major change took place in the character of the White Salmon River valley. Much of the timber was cut and sluiced down the river to mills where it was sawed into lumber. In addition, an "Apple Boom" began around 1905. As a result, thousands of acres of land were cleared for orchards. Due to a number of factors, many of the orchards were unsuccessful. Some were converted to more viable crops, but "most were simply abandoned and reclaimed by brush and second-growth timber." (McCoy, 1987).

GEOLOGY

The White Salmon River has a complex geologic history. Rocks within the watershed are of various ages and largely volcanic in origin.

"Faulting and folding have elevated blocks, and subsequent erosion, mud flows, and glaciation (sometimes concurrent with volcanism) have resulted in the present land form of precipitous cliffs, deeply incised canyons and relatively flat valley floors" (Bechtel, 1981).

Long intervals existed between periodic volcanic eruptions, during which surface layers became deeply weathered, deformed and eroded. Much of the volcanic rock consists of a thick series of parallel basalt flows. Layers of sedimentary material and volcanic ash lie between some flows, with volcanic glass and pillow lava occurring at some contact zones. Recent geologic flows that filled the upper and tributary valleys are generally thin (<40') and flow contacts are generally very porous (Bureau of Reclamation, 1974). Sedimentary formations are found in places along the lower White Salmon River, below Husum. Most of these sediments and gravels were deposited during the catastrophic floods which carved out the Columbia River Gorge through the Cascade mountain range.

The river flows through a spectacular, deep (40-120 feet), narrow (30-100 feet), vertical-walled canyon from RM 10 to 22. This gorge is a result of the river cutting down through the more recent basalt flows. The gorge is a regionally significant geologic and hydrologic resource due to the length, geology, continuous vertical walls, unaltered condition, and numerous springs (Ratcliffe, 1989). The gradient of the river channel is steep with sections dropping from 80 to 200 feet per mile. This results in a "pool-drop" river with numerous waterfalls, cascades, and rapids interspersed with deep pools. The highly visible Husum Falls, located in the town of Husum, has a vertical drop of 8 feet, and is the only major falls within the designated segment.

Several small caves are located along the volcanic walls of the gorge section. Access into this area is difficult; as a result, it has remained in a fairly natural condition. The moist rock walls provide exceptional micro-habitats for plants and animals.

Springs and seeps are common throughout the entire White Salmon drainage. However, there is a concentration of springs along the middle and lower portions of the river gorge. The younger, more porous rocks within the gorge and near the surface of the upper portions of the watershed permit better vertical and lateral movement of water than the older, deeper, less porous lavas. The presence and depth of the river cutting down through numerous flow contacts in the gorge results in this concentration of springs issuing from beneath the various flow layers exposed along the canyon walls.

SOILS

The basin's temperate climate and lush forest cover are conducive to rapid and deep geologic weathering. Consequently, there is a sufficient mantle of porous volcanic material to produce soils that have good depth and water-holding capacities. Soils in the valley areas are loams and silt-loams of moderate fertility. These are underlain by basalt upstream from Husum, and by gravel below Husum. Soils in the hilly areas are loam soils derived from weathered volcanic ash and lava, and are generally deep and well-drained.

Soils may be absent on the steep slopes (rock outcrops and talus) or shallow, with low to moderate fertility. Neither the hills nor valleys have widespread soil depth problems (Bureau of Reclamation, 1974). Although the valley floor is narrow, it contains a large portion of the basin's productive land. The hilly lands upslope also contain a high percentage of the cultivatable land with both excellent air and water drainage.

MINERALS AND GEOTHERMAL RESOURCES

No significant mineral deposits have been located within the river corridor. There are a few non-metallic deposits such as basalt, sand and

gravel, and probably high alumina clay. The closest known geothermal potential is the Mt. St. Helens geothermal resources area, located some distance to the northwest on the west slope of the Cascade Mountains (Bureau of Reclamation, 1974).

Rock Outcrop



HYDROLOGY

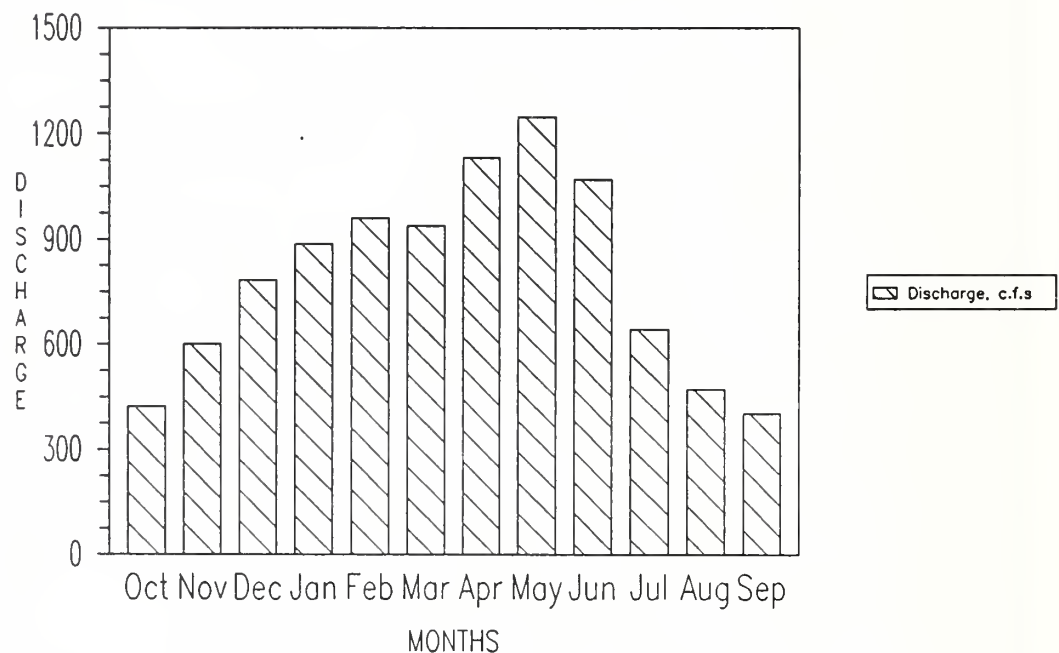
STREAMFLOW

Sustained streamflow in the White Salmon River results directly from a diverse combination of rain, snow and glacial melt, as well as a significant amount of ground water contribution. Average annual discharge is 1,140 cubic feet per second (cfs), with only moderate fluctuations in flow (Brown, 1979). Streamflow is lowest in late summer/early fall and begins to increase in direct response to fall rainstorms. Winter flows are sustained by snow and rainfall at lower elevations, with highest average discharge occurring in late spring as a result of rain, snow and glacier melt.

Flows are sustained into early summer by snow and glacial melt. Late summer flows are sustained by ground water contribution.

Generally, instantaneous, peak flows are most likely to occur from November to June, with flood flows resulting from rain-on-snow events in late winter through early spring. Flood damage along the designated river segment has been very limited. Historically, floods have damaged roads, bridges and residences in the Husum area and have caused severe erosion at the upper end of Northwestern Lake, as well as damaging nearby recreation facilities and cabins at the lake (Bureau of Reclamation, 1974).

Figure III-1: Average Monthly Flow - White Salmon River at BZ Corner [50 year Synthesized Record, 1927-1976, (Bechtel, 1981)]



Several major tributaries flow into the designated section of the White Salmon River: Gilmer Creek at the upstream end of the section, with Rattlesnake Creek flowing into the middle of the section at Husum, Spring Creek below the town of Husum, and Buck Creek at the downstream end of the designated section. These tributaries normally contain some surface flows throughout the year, although Rattlesnake Creek "dries up" during late summer of some years, and Gilmer Creek may be dried up by irrigation withdrawals.

GROUND WATER

Studies by the Bureau of Reclamation have shown that the area is underlain primarily by basalt with low ground water yields. Depth to ground water is usually less than 100 feet. It is probable that most existing wells are producing from shallow, or perched, water tables. In early spring, the water table may rise close to the surface (Bureau of Reclamation, 1974).

The USGS streamflow records for the White Salmon River show that the river contains reaches that have unusual "gains" or "losses" of surface water. The "losing" reaches extend through the Trout Lake valley, with "gaining" reaches starting about five miles upstream from BZ Corner and continuing downstream to Husum. Some decline in streamflow occurs from diverting water for irrigation, however, total loss is more than can be accounted for by irrigation withdrawals. In addition, small tributary streams in the area disappear completely into the ground. Downstream from the "losing" reach, the river gains an annual average discharge of almost 700 cfs in unaccounted flows. A large part of this gain is most likely attributed to water which has been carried through an underground network, emerging as surface water. Numerous springs and seeps are in evidence adjacent to the stream channel in this reach.

WATER USES & RIGHTS

Major uses of water in the drainage presently include power generation, irrigation, and municipi-

pal and residential drinking water. The river also supports an outstanding resident trout fishery and year-round whitewater boating. Virtually all of these uses are augmented by the river's rare attribute of constant flows.

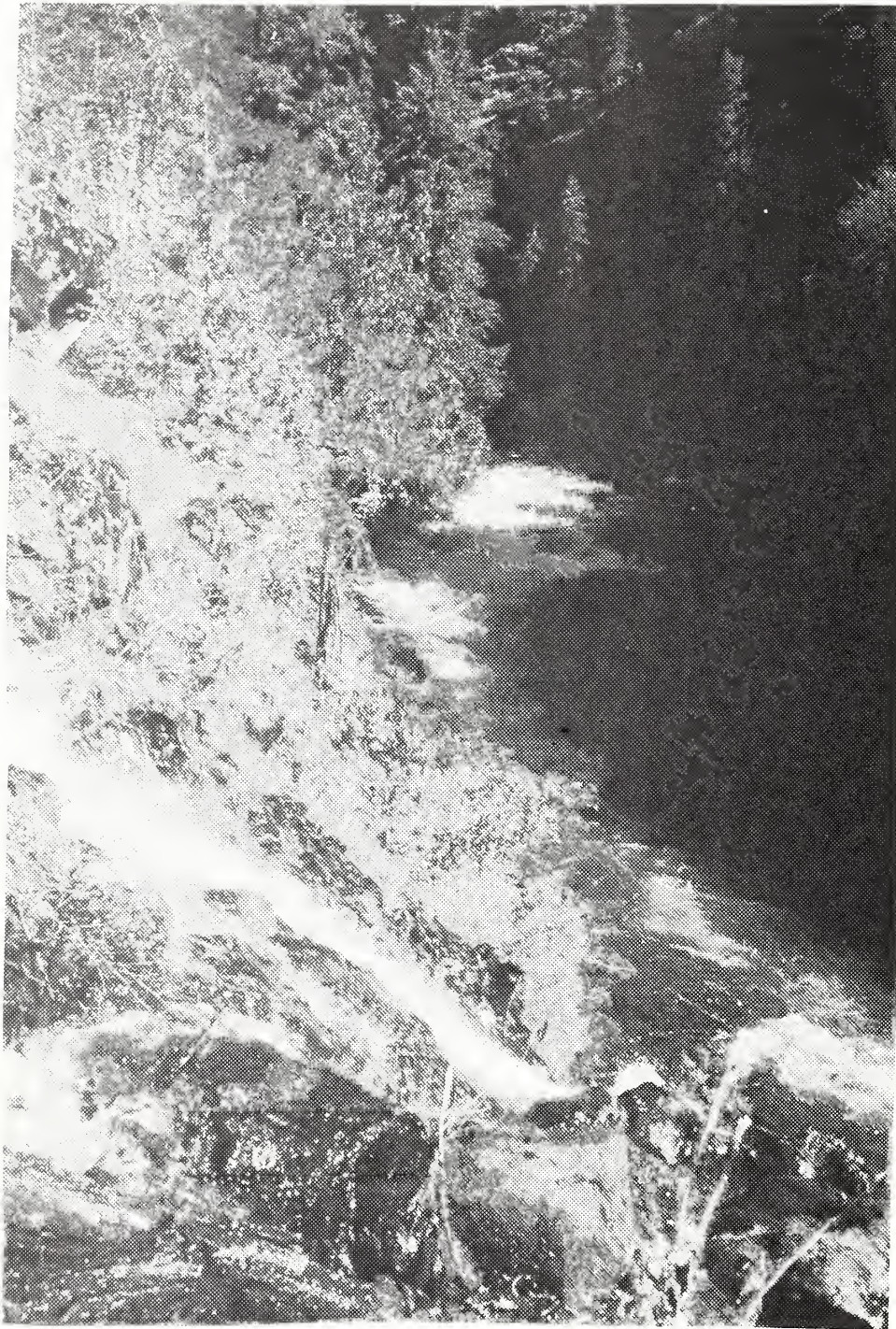
The Washington State Department of Ecology has not adjudicated (validated) water rights, but maintains a register of surface and ground water claims. The state has no plans for adjudication in the near future. Pacific Power Company claims vested water rights of 1,200 cfs, or almost all of the current flows, for power generation at the Condit Dam facility. The White Salmon Irrigation District and community of White Salmon utilize surface water from Buck Creek for irrigation in both the Husum and White Salmon areas, as well as drinking water for White Salmon and Bingen.

These uses claim rights (8½ cfs) for almost all of the surface water in Buck Creek during low flow periods.* Likewise, most summer tributary flows in Gilmer Creek and Rattlesnake Creek are already claimed for agricultural use. Approximately 1,000 acres of land, mainly in orchards, pasture and alfalfa, are irrigated along the designated section of river (Bureau of Reclamation, 1974). Irrigation systems include both direct gravity and pumped diversions from the White Salmon and its tributaries, as well as pumped groundwater. There is a trend of increasing use of pumped irrigation water for sprinkler systems. Neither Husum nor BZ Corner has a community drinking water system. Residents rely on springs or shallow wells for untreated drinking water.

WATER QUALITY

Water quality within the designated section of the river is generally thought to be excellent (classified as a Washington State Class A waterbody). Very limited information exists, with assessments reflecting conclusions based on qualitative information and water monitoring data which are more than five years old, but still considered to reflect current conditions.

"Numerous streams and seeps contribute to the White Salmon River's streamflow"



Water quality has been systematically monitored at the USGS gauge at Underwood near the river's mouth. This monitoring indicates that the White Salmon meets or exceeds federally approved state Class A standards (addressing turbidity, temperature, pH and dissolved oxygen) for rivers used for domestic water supply, fish and wildlife habitat, and primary contact recreation. However, the standard for fecal coliform was exceeded seven times during monthly sampling for the period of available data from 1972 through 1983 (Land & Water Associates, 1989). The upper White Salmon River, upstream of the national forest boundary, is listed as a "threatened" waterbody. It currently meets state standards for its beneficial uses, but is in danger of failing to meet the fecal coliform criteria in the future due to "unknown" sources (Washington State Department of Ecology, 1989). Fecal coliform bacteria, found normally in the intestinal tracts of warm-blooded animals, are used as an indicator of other bacteria or disease-causing organisms.

Water temperatures are low, ranging from 38° to 52° F, due to the effect of glacial melt waters, ground water contribution, the steep gradient of the channel, and vertical canyon walls that block direct sunlight from surface waters throughout most of the day.

Iron content is high enough to affect taste and odor in a public water supply, and the phosphorus and nitrogen levels are in excess of levels recognized as supporting algal blooms in quiet water (Bureau of Reclamation, 1974). Northwestern Lake, which lies just below the designated section, supports large growths of aquatic vegetation.

The river has a relatively low sediment load through the designated reach. High turbidity

during low flow periods below the Trout Lake valley can be explained by presence of glacial flour and/or sediments from agricultural runoff. A recent survey of non-point source pollution within the White Salmon drainage by the Underwood Conservation District identified agricultural runoff as a potential water quality problem within the basin (Stampfli, 1989). Significant "loss" of surface flows within the Trout Lake valley and the subsequent "gain" from ground water within the gorge dramatically dilutes turbidity impacts to water quality from upstream of the designated section.

There is little information documenting possible ground water contamination. Washington State does not have comprehensive mapping of ground water aquifers and recharge zones, nor a ground water monitoring program. Therefore, any conclusions are inferential, based on the current understanding of effects of potentially contaminating activities and limited knowledge of the characteristics of underlying aquifers. The Washington State Department of Ecology characterizes the aquifers in western Klickitat County as "unconfined and vulnerable" (Department of Ecology, 1989).

Evaluation of information about activities that are known to cause pollution raises several concerns about potential and existing contamination of groundwater. There is increasing incidence of nitrates in ground water, especially in the irrigated regions of the Columbia Basin and in areas of high densities of residential septic systems. Also of concern is the potential for leachable pesticides to appear in ground water. Statewide, the principal nonpoint (diffuse) sources of ground water contamination are septic systems, agricultural chemicals, and urban and industrial pollutants in stormwater. (DOE, 1989).

Lower section of designated portion of the White Salmon River, just above Northwestern Lake



FISH

ANADROMOUS FISH

The migration of anadromous fish up the White Salmon River has been blocked since construction of Condit Dam (RM 3.3) in 1913. Various state and federal agencies and the Yakima Indian Nation are considering options to enhance runs returning to tributaries of the Columbia River. The White Salmon River will likely play a role in this enhancement effort and options to reintroduce salmon and steelhead above the dam are being considered. A detailed discussion of the anadromous fish reintroduction issue is in Appendix C.

RESIDENT FISH

The resident fish population in the White Salmon River is considered one of the best in the state of Washington and may be second only to the Deschutes River in Oregon when considered on a regional basis (Land and Water Associates, 1989). The White Salmon River is exceptional for its habitat quality, diversity of species, abundance, and size of fish, and the recreational opportunity it offers. As a result, resident fish were determined to be one of the outstandingly remarkable values for which the White Salmon was designated as part of the Wild and Scenic Rivers System.

Rainbow trout is the principle species, but occasional brook trout, Dolly Varden and possibly bull trout also occur. The designated portion of the river from Gilmer Creek to Northwestern Lake is noted for trophy size rainbow trout. Reports of four-to-five pound fish in the 24 inch category are not uncommon (Weinheimer, 1990).

The river provides excellent rainbow trout habitat with numerous rapids, boulders, pools and consistent water temperatures. The Washington

Department of Wildlife has indicated that habitat for rainbow trout is at an optimum level (Weinheimer, 1991). Water quality is good, but the cool temperatures may actually impede growth rates. The presence of trophy size fish can be largely attributed to light fishing pressure resulting from the lack of public access. Until recently, there was no publicly owned shoreline on the river. In addition to the lack of public access, the steep and rugged terrain along much of the river serves to discourage fishing from the bank.

While fishing pressure has been light, at least two commercial outfitters offer guided fishing trips. Additionally, some fishing occurs by bank anglers that either own property along the river or have asked permission from property owners. Rainbow trout are considered to be easily caught and presently there are no special harvest regulations for the White Salmon River. The Department of Wildlife has indicated that it will likely implement new regulations for 1992 that will be designed to reduce the harvest of trout in the Wild and Scenic River portion of the river (Weinheimer, 1991).

The Washington Department of Wildlife, which manages rainbow trout, admits there are a lot of unknowns about the rainbow population. The trout appear to be reproducing, but biologists are not sure how much or exactly where. The department plants hatchery rainbow trout below the designated river section in Northwestern Lake and above in Trout Lake. In 1990, biologists began marking the hatchery fish to help determine the habits of the planted fish. The investigations begun in 1990 are also looking for the presence of bull trout, which is on the state sensitive species list. Biologists have recently determined that the rainbow trout resident to the river between BZ Corner and Northwestern Lake are native to the river and have not mixed with the planted fish.

The White Salmon River area supports a variety of plant communities



PLANTS AND ANIMALS

INTRODUCTION

Information on wildlife species and habitat occurrence in the White Salmon River drainage has been derived from multiple sources. Scientists from the Washington State DNR Heritage Program, Washington Department of Wildlife biologists, Gifford Pinchot National Forest personnel, local residents, and research and inventory data collected in the river drainage have all been sources of ecological and wildlife information. In general, there is a moderate amount of plant and wildlife information specifically for the White Salmon River corridor. Data on the quantification of species, exact areas of use or population trends, does not exist.

In the summer of 1988, vegetation and land use inventories were conducted within a one-mile corridor of the Lower White Salmon River (USDA, 1988). Homogeneous nonforested lands greater than two acres and forested stands of five acres or greater were outlined on aerial photographs. Ground-truthing provided specific information on understory vegetation and land uses. In June of 1988, threatened, endangered, sensitive, and unique plant populations were inventoried within the same one-mile corridor. This overview was conducted from Buck Creek (RM 5) to Trout Creek (RM 26). The primary focus was in the river canyon where the lands are frequently splashed with water and between the edges of forest and meadows. These recently conducted inventories of plants and animals of the river have not eliminated the need for additional baseline information, particularly on private lands.

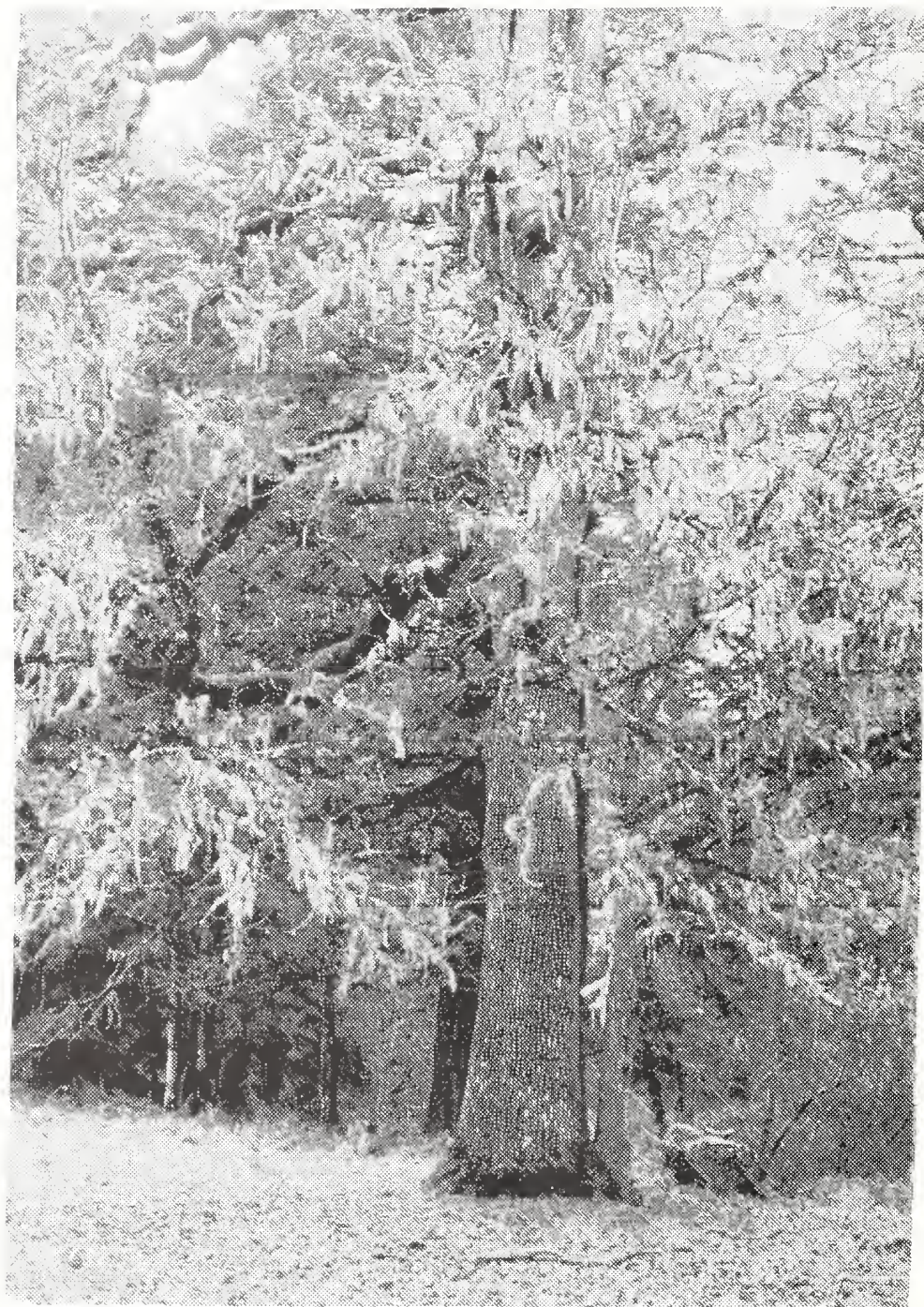
Riparian communities associated with the river canyon and non-riparian communities on adjacent uplands occur within the lower White Salmon River corridor. The river canyon, framed within steep walls of rock, contains the most unaltered zone of vegetation and landscape within the

corridor. The primary land uses outside of the canyon on private lands include fruit orchards, commercial timber production, cropland farms, and residential developments.

The riparian ecosystems are unique in their support of highly diverse and abundant wildlife communities (Hirsch, et al., 1978). They are equally important in providing connectiveness between adjoining lands (Ewel, 1978). Bald eagles, osprey, and great blue herons make the White Salmon River their exclusive home. For turkey, elk, and mule deer, the river connects their winter and summer habitats. For humans, the river is the yarn that ties the adjoining uplands together. In addition to the rich array of wildlife associated with the White Salmon River, this geographic area supports many unique plant communities associated with the transitional climatic zone in which the river lies.

The bald eagle, a threatened species under the Endangered Species Act, 1973 (ESA) is known to occur within the existing National Wild and Scenic River boundary. This species is provided special management consideration on private and public lands as defined by the law. One of the purposes of the ESA is to provide for the conservation of habitat that threatened and endangered species require. Section 7 of the act directs federal agencies to ensure that actions they authorize, fund or carry out will not jeopardize the continued existence of endangered or threatened species nor result in the destruction or adverse modification of designated critical habitat. Section 9 of the Act defines how the Act applies to all individual citizens, state and other non-federal agencies and lands. Section 9 defines prohibitions which include significant habitat modification or degradation that may injure or kill wildlife or may prevent species recovery by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

Oregon white oak



The U.S. Fish and Wildlife Service has the authority and responsibility to administer the Endangered Species Act on both private and public lands. Future assessment of recovery and impacts will be dependent upon available baseline information and monitoring of threatened and endangered species and their habitat. Typically this type of information is more readily available on public rather than private lands. Established policies related to threatened and endangered species management also make the administration of the ESA more easily and consistently carried out on public lands.

In compliance with Section 7 of the ESA, informal consultation with the U.S. Fish and Wildlife Service was initiated in April, 1988. Impacts to all known or suspected threatened, endangered or sensitive plant and animal species (federal designation) have been addressed in this document.

PLANT COMMUNITIES

RIPARIAN PLANT COMMUNITIES

Within the lower White Salmon River corridor is a mixture of riparian, wetland and non-riparian plant communities. Steep, rocky and well drained soils of the canyon support non-riparian vegetation such as Douglas-fir (*Psuedotsuga menziesii*), western redcedar (*Thuja plicata*) ponderosa pine (*Pinus ponderosa*) and Oregon white oak (*Quercus garryana*). Riparian community plants such as red alder (*Alnus rubra*), big-leafed maple (*Acer macrophyllum*) and willow (*Salix* spp.) occur closer to the water's edge. Buck and Rattlesnake Creeks enter perpendicular to the river and the travelways to the upland areas. Cottonwood (*Populus* spp.) and willow (*Salix* spp.) are two predominant riparian community species found in both drainages. Springs at Spring Creek and the old Hendrix Homestead occur where the river bank flattens, widening the water table which saturates the soils of adjacent land. Cattails (*Typha* spp.), sedge (*Carex* spp.) and rushes (*Juncus* spp.) are associated with these wetlands. Riparian lands total 232 acres

(4% of the corridor) and wetlands account for 25 acres (0.4% of the corridor).

OREGON WHITE OAK COMMUNITIES

Oregon white oak (*Quercus garryana*) is widely accepted as a unique plant community. Oak stands often have three expressions: savannah, forest, and scrub form. Savannah formed stands are generally described as large individual trees with spreading branches and with a grass or herbaceous understory. Sites are typically dry and the stands are usually pure oak. It is believed that savannah oak stands result from a long history of fire with little competition from other tree species. Forest-formed stands are generally described as containing tall, tree-like plants with branching that occurs in the upper third of the plant. Stand canopies are relatively closed and often occur with a mixed conifer component of Douglas-fir and/or ponderosa pine. These oak stands result under strong competitive conditions with other trees. Scrub form stands are dense, small sized oaks often with a closed canopy and a grass or herbaceous understory. Under some circumstances these are believed to be a result of sprouting from once larger trees (perhaps savannah types) which burned or died. These stands occur as pure stands or mixed, usually on drier sites.

Within the one-mile corridor inventoried in the summer of 1988, two pure oak stands totaling 12 acres were identified. A pure oak stand is defined as any inventoried forested stand in which Oregon white oak is the only tree species present. Forested stands include lands which are at least 10% occupied with forest trees and are not currently developed for non-forest uses. These two stands represent 0.4% of the total forested area. Pure oak stands would more commonly occur on the drier uplands away from the river corridor and out of the inventoried area. Well-drained, dry soils on south facing slopes are the location where pure oak stands persist in the lower White Salmon. Suppression of fire was probably the most important factor in reducing Oregon white oak communities in the lower White Salmon River during the first part of the century. Most white oak stands are eventually replaced by trees such as Douglas-fir.

By reducing competing plant species and stimulating oak sprouting, prescribed fire could be an important tool used for the long term maintenance of Oregon white oak (Sugihara, et al., 1986). Clearcutting, often likened to fire as an enhancement tool, however, has not had the same effects in oak woodlands of California. Clearcutting of Douglas-fir/oak stands has resulted in the re-establishment of shrubs and tree seedlings of conifer forests, not oak and California woodland species (Reed, et al., 1986).

Within the same one-mile corridor, mixed conifer-oak stands account for 2,023 acres, or 63% of the total forested area. Included in these acreages are stands that are described as "primary and secondary oak stands plus stands with a minor amount of oak" (Figure III-2). Primary oak stands are stands where oak occurs as the primary or secondary species in the primary (highest) canopy. These stands account for 250 acres or 7.8% of the total forested area. Secondary oak stands are stands where oak occurs as the primary or secondary species in the second (middle) canopy. These stands account for 1,267 acres or 39.4% of the total forested area. Stands with a minor amount of oak are those stands where oak is a tertiary species in the second canopy or primary, secondary, or tertiary in the third (lowest) canopy. These stands account for 493 acres or 15.3% of the total forested area (see Figure III-2, and the Forested Lands Map on the opposite page).

Figure III-2: Forested Lands in the Lower White Salmon River Corridor

CATEGORY	ACRES	%
Primary Oak Stands		
Pure Oak Stands	12	< 1
Other Primary Oak Stands	250	8
Secondary Oak Stands	1,267	39
Stands With Minor Amount of Oak	493	15
Forested Stands With No Oak	1,193	37
Total	3,216	100

Throughout the state of Washington and within the White Salmon River drainage, oak stands that have not been cut for firewood, girdled, thinned or experienced some form of timber harvest or severe burn are an exception rather than the rule. Consequently, the natural oak ecosystem has been severely changed and fragmented and the study of old oak stands has not clearly defined its ecological characteristics. Within the White Salmon River drainage there are numerous examples of individual oak trees estimated at well over 300 years of age, and there are known old-growth oak stands which are being lost due to competition from conifers that have invaded these areas after fire suppression was actively practiced. Many of these old-growth stands appear to have developed as savannah form stands.

Oak, not previously a commercially valuable species, has been allowed in many areas to reach very old ages at which stage rot of the trunk and larger branches becomes more prevalent creating a large number and variety of snags and cavities. In the meantime, the commercially valuable conifer species have been cut on far shorter rotations (Gumtow-Farrier, 1990). Consequently, oak communities are presently the best source of snags and down woody material in the White Salmon River area. Shortened rotations of Douglas-fir can also upset ecological processes associated with nitrogen fixing lichens that appear in older fir stands. As an unmanaged and often ignored species, mature oak provides an important substrate on which lichens and fungi grow. Besides fixing atmospheric nitrogen, which is used on the site by trees, lichens and fungi associated with the oaks provide forage for deer and the western gray squirrel.

Some of the largest oak trees in the Columbia River Gorge region have been identified in the White Salmon River drainage (Kavanaugh, 1990). There is no historical account of the quantity and distribution of oak in the region. Current practices, such as girdling and selective tree removal for firewood or to reduce competition to conifers, reflect the lack of interest among some private landowners in maintaining oak communities.

FORESTED LANDS

LOWER WHITE SALMON RIVER CORRIDOR

FOREST STANDS WITH OAK

- PRIMARY OAK STANDS
- SECONDARY OAK STANDS
- MINOR OAK STANDS

FOREST STANDS WITHOUT OAK

- STANDS WITH NO OAK
- NON-FORESTED LANDS

PRIMARY OAK STANDS: Stands where oak is the primary or secondary species in the highest canopy.

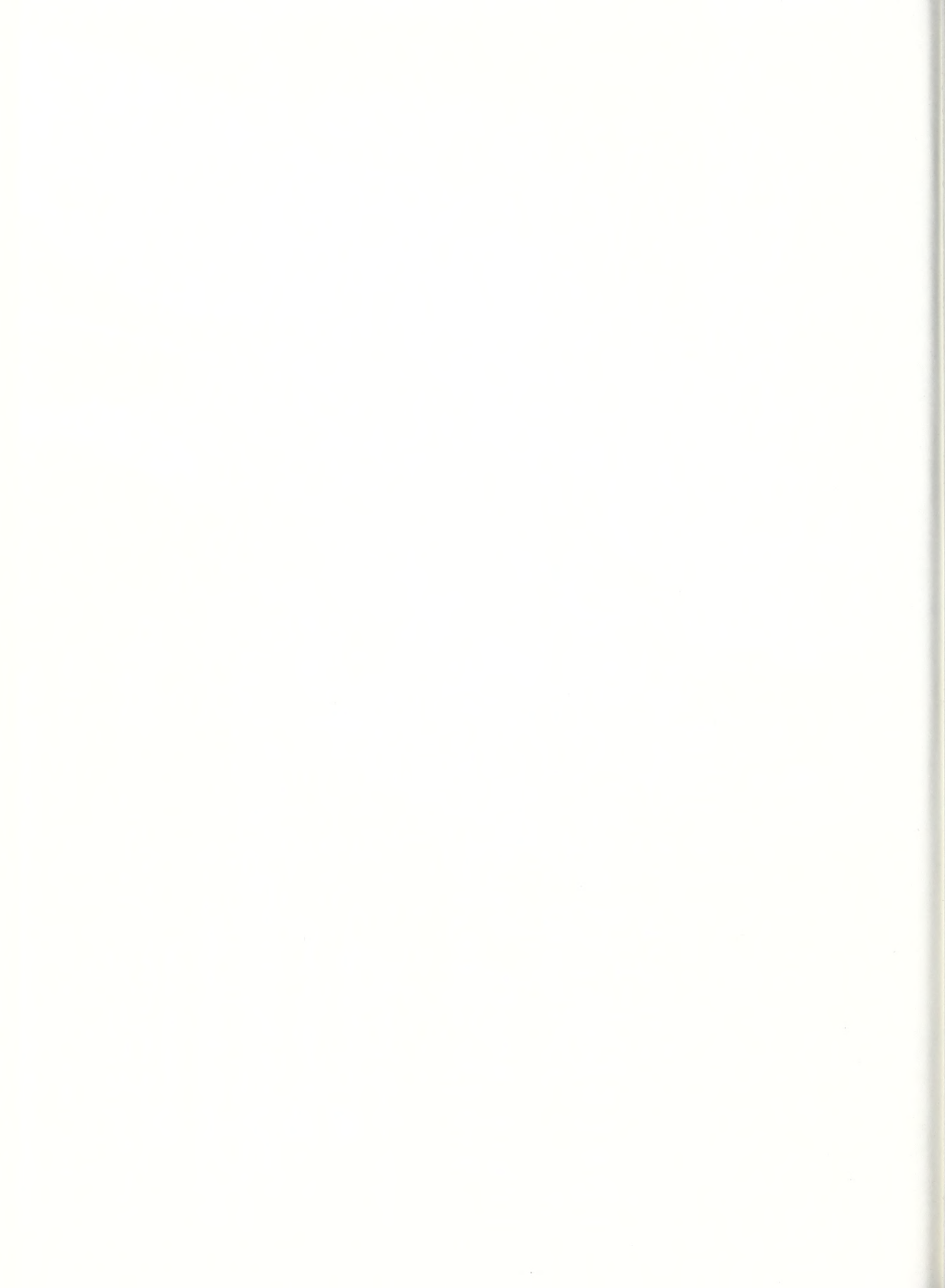
SECONDARY OAK STANDS: Stands where oak is the primary or secondary species in the middle canopy.

STANDS WITH A MINOR AMOUNT OF OAK: Stands where oak is the tertiary species in the middle canopy or the primary, secondary, or tertiary species in the lowest canopy.

OTHER FOREST STANDS: Primarily conifer stands.

NON-FOREST LAND: Land, less than 10% covered with forest trees, where shrubs, grasses, and forbs predominate (includes orchards).

SCALE: 1" = 2,000 Feet



Washington State's Department of Wildlife has identified Oregon white oak as a "critical" wildlife community warranting special management consideration (Crawford & Anderson, 1990).

CONIFEROUS COMMUNITIES

Mixed conifer stands of ponderosa pine and Douglas-fir occur within the lower White Salmon River corridor on 1,193 acres.

Both fir and pine have been managed for their commercial timber value on much of the private land. Timber removal prescriptions have included both clear-cutting and selective tree removal. Both practices reduce the occurrence of down, woody material and snags. Many of the stands that are currently being harvested have mature/second growth stand characteristics. Minimal in its occurrence, western redcedar occurs along the river canyon and in the Spring and Buck Creek drainages.

The history of forest management within the lower White Salmon River corridor has resulted in a predominance of early successional plant communities. This pattern thus elevates the uniqueness of mature and old-growth timber

stands. The importance of old-growth is based not only on its rarity, but also on the fact that old-growth stands are characterized as having more structural and functional diversity than younger successional stands (Thomas, et al., 1988). Having more diversity, old-growth stands typically support more animal species and communities.

The ecological complexity associated with old-growth forest, much of which is not yet understood, makes it highly improbable that old-growth forests can be created through forest practices as currently applied (Thomas, et al., 1988). Therefore, it is important that potential old-growth be identified and managed in order to meet the ecological needs of old-growth communities we are not currently able to meet. Replacement old-growth stands are stands that do not yet meet all of the criteria used to define old-growth communities. Replacement stands are typically next in line in terms of ecological progression. The need to manage for replacement stands applies to both conifer and oak communities. Determination of old-growth or replacement old growth has not been made within any of the alternative boundaries or on adjoining private lands.

Douglas-fir



THREATENED, ENDANGERED AND SENSITIVE PLANT SPECIES

The plant overview conducted in June, 1988, identified no federally listed threatened or endangered species within the survey area, but did identify three species listed as threatened on the Washington State list. Thirty-five plant species found on the R-6 Sensitive Species List are suspected of occurring in the area. Four of these were found in the drainage but just outside

the Scenic Boundary. The population viability of these plants is a concern due to: 1) significant current or predicted downward trends in population numbers or density; or 2) significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. These species are also identified in Figure III-3, and discussed in biological evaluations which have been written for all R-6 sensitive plant species either known or suspected to occur within the boundaries.

Figure III-3: Documented and Suspected R-6 Sensitive Plant Species.

SCIENTIFIC NAME	COMMON NAME	STATUS	OCCURRENCE
<i>Lomatium suksdorfii</i>	Suksdorf's lomatium (a desert parsley)	WA Threatened	Documented
<i>Cyperipedium fasciculatum</i>	fasciculated ladyslipper	WA Threatened	Documented
<i>Sisyrinchium sarmentosum</i>	(pale blue-eyed grass)	WA Threatened	Documented
<i>Suksdorfia violacea</i>	(saxifrage family)	WA Monitor	Documented
<i>Agrostis howellii</i>	Howell's bentgrass	OR Sensitive	Suspected
<i>Bolandra oregana</i>	Oregon bolandra	WA/OR Sensitive	Suspected
<i>Botrychium</i> spp.	grape-fern	WA/OR T&E&S	Suspected
<i>Calochortus longebarbatus</i> var. <i>longebarbatus</i>	Mariposa lily	WA/OR Threatened	Suspected
<i>Carex densa</i>	dense sedge	WA Sensitive	Suspected
<i>Carex interrupta</i>	sedge	WA Sensitive	Suspected
<i>Chrysopsis chrysophylla</i>	chinquapin	WA Sensitive	Suspected
<i>Collinsia sparsiflora</i> var. <i>bruciae</i>	few-flowered	WA Sensitive	Suspected
<i>Cyperipedium calceolis</i> var. <i>parviflorum</i>	Lady's slipper	WA Endangered	Suspected
<i>Cyperus rivularis</i>	flatsedge	WA/OR Sensitive	Suspected
<i>Epipactis gigantea</i>	giant helleborine	WA Sensitive	Suspected
<i>Erigeron howellii</i>	Howell's daisy	WA/OR T&S	Suspected
<i>Eryngium petiolatum</i>	coyote thistle	WA Threatened	Suspected
<i>Githopsis speculariodes</i>	common blue cup	WA Sensitive	Suspected
<i>Hackelia diffusa</i> var. <i>diffusa</i>	branching stickseed	WA Endangered	Suspected
<i>Linanthus bakeri</i>	Baker's Linanthus	WA Sensitive	Suspected

Figure III-3: Documented and Suspected R-6 Sensitive Plant Species. (continued)

SCIENTIFIC NAME	COMMON NAME	STATUS	OCCURRENCE
<i>Lomatium laevigatum</i>	smooth desert parsley	WA/OR Sensitive	Suspected
<i>Lycopodium annotinum</i>	clubmoss	OR Threatened	Suspected
<i>Meconella oregana</i>	white meconella	OR Sensitive	Suspected
<i>Mimulus washingtonensis</i>	monkey flower	WA/OR S&T	Suspected
<i>Montia diffusa</i>	branching montia	WA/OR Sensitive	Suspected
<i>Navarretia tagetina</i>	marigold navarretia (phlox family)	WA Threatened	Suspected
<i>Ophioglossum vulgatum</i>	Adder's-tongue	WA/OR T&E	Suspected
<i>Orobanche pinorum</i>	pine broomrape	WA Sensitive	Suspected
<i>Penstemon barrettiae</i>	Barrett's penstemom	WA/OR Threatened	Suspected
<i>Pluericospora fimbriolata</i>	fringed-pinesap	WA Sensitive	Suspected
<i>Polystichum californicum</i>	sword-fern	WA/OR S&T	Suspected
<i>Scribneria bolanderi</i>	hackel	OR Threatened	Suspected
<i>Spiranthes romanzoffiana</i>	Ladies' tresses	WA Sensitive	Suspected
<i>Tillaea aquatica</i>	pygmy-weed	WA Sensitive	Suspected
<i>Veratrum insolitum</i>	false hellebore	WA Sensitive	Suspected

Osprey have been observed flying the river corridor and at Northwestern Lake



ANIMALS

A complete survey of documented or suspected animals within the designated river corridor does not exist. However, closely tied to the vegetative communities are the wildlife communities. The wildlife species that assuredly occur within the river corridor are those species that require small areas of land to exist on, live in early successional plant communities, and are tolerant of and tolerated by humans.

BIRDS

Cavity excavators such as common flickers, downy and hairy woodpeckers occur in the oak and mixed conifer/oak communities of the river. These birds are identified by the neighboring Gifford Pinchot National Forest as indicators of species needing snags and down logs. Secondary cavity nesting birds, such as red and white-breasted nuthatches and bluebirds, have been observed in the oak/bigleaf maple stands of the river. These observations concur with other recent research findings where oak/maple stands have been documented as having significantly more cavities than conifers within the same stand (Guntow-Farrier, 1990).

Foraging habitat along the edges of meadows and natural openings are used by insect-eating birds such as western bluebirds, kestrels and swallows. Potential accipiter (goshawks, Cooper's, sharpshinned hawks) nesting habitat exists in the mature pine and fir forest as exemplified in the 40-acre parcel of land east of the river that was acquired by the Forest Service. However, there is no recent documentation of goshawk, Cooper's or sharpshinned hawk nesting in the boundary. Osprey have been observed flying the river corridor and nest at Northwestern Lake. Merganser, Harlequin duck, wood duck and mallard habitat is found along the waterway of the river. The river provides important nesting and brood rearing habitat for these species. Northern pygmy and great horned owls occur within the White Salmon drainage.

Croplands, native berry-producing shrubfields and young woodlands provide cover and foraging

habitat for mountain quail and ruffed grouse. In general, the mixture of agricultural croplands and second growth forest stands adjacent to the river provide abundant nesting and foraging habitat for bird species associated with early successional habitats. The most limited type of bird habitat in the drainage is that required by birds dependent upon late and old growth forested habitat such as the bald eagle, spotted owl, goshawk and pileated woodpecker. All of these species require large acreages of unfragmented habitat.

Northern Bald Eagle (Threatened species)

The northern bald eagle is managed as a threatened species by both the state of Washington and the federal government. Historically, the White Salmon River valley was used by the bald eagle. Historic salmon runs and waterfowl of the White Salmon River, carrion available from the upland winter ranges, and large trees in undisturbed habitat provided nesting, roosting and foraging habitat for bald eagles. Today the bald eagle prey base is made up of salmon and steelhead carcasses found below the dam, fish injured or killed from the hydropower operation at Northwestern Lake dam, cattle carcasses found in the upper Trout Lake valley, waterfowl, and other carrion. Scattered large conifers, preferred for nesting, still exist along the river and upland in the Buck Creek drainage. Recent bald eagle surveys indicate the White Salmon drainage is used by bald eagles primarily in the winter months. Adult eagles have consistently been observed around Northwestern Lake and in mature Douglas-fir at the river's edge north of BZ Corner (WA Dept. of Wildlife, 1988-89). Large Douglas-fir in the lateral drainages of the river are used as roost trees, providing thermal cover from the winter weather. For the White Salmon River to support year round residents, the Columbia River Gorge eagle population must successfully overcome threats of contaminants, human disturbance, loss of nesting habitat and diminishing food sources. The lower White Salmon is a tributary of the Columbia River recovery zone (Bonneville Pool) which is targeted for three nesting pairs of eagles (Interagency Pacific Bald Eagle Recovery Plan). The White Salmon is an important part of the bigger recovery

of nesting bald eagles in the Columbia River Gorge.

Peregrine Falcon (Endangered Species)

The American peregrine falcon is managed as an endangered species by both the state of Washington and the federal government. Historically the peregrine falcon used the White Salmon River drainage. Suitable nesting habitat in the form of rock cliffs is unavailable in the drainage. Waterfowl and passerines migrating through the White Salmon drainage could be an available prey source for migrating falcons. As the peregrine falcon becomes re-established in the Columbia River Gorge, one would expect to observe resident birds of the Gorge using the White Salmon drainage as foraging habitat (Silovsky, 1988). The Recovery Plan for Peregrine Falcon (Pacific Population) 1982, identifies an objective of managing for 3 nesting pairs in the Columbia River Gorge, including reaches of the Lower White Salmon River.

Spotted Owl (Threatened Species and MIS for old growth forest)

The northern spotted owl was recently designated a threatened species under the federal Endangered Species Act of 1973. The Gifford Pinchot National Forest identifies the northern spotted owl as a management indicator species (MIS) for old growth conifer forests. Little information is available on the occurrence of the northern spotted owl in the lower White Salmon River drainage. An "unverified" but "probable" sighting of a spotted owl was documented around the Little Buck Creek drainage in 1989 (Hall, 1990). The behavior of the bird, location of the sighting relative to known spotted owl territories, and the habitat the bird was observed in, all add to the probability of the sighting. Potential spotted owl habitat is most likely to occur well off the White Salmon River around the Spring Creek to Buck Creek drainages. It is within this area that unfragmented stands of mature and older conifers, reaching into the thousands of acres needed by the spotted owl can be found.

River corridors are commonly used by young birds dispersing away from their nest territory.

Continuous stands of coniferous trees along rivers provide security cover from predators and thus are an important characteristic of dispersal routes for young owls. Potential for the White Salmon River to be used as a dispersal route is possible, but has not yet been documented.

Pileated Woodpecker (MIS for mature and old growth forest)

The pileated woodpecker, a primary cavity excavator, is identified as a mature and old growth forest-dependent species on the neighboring Gifford-Pinchot National Forest. The woodpecker's ecological and biological needs are in part met in mature and old growth communities. Specific old growth characteristics needed by the pileated woodpecker for roosting and nesting are large diameter trees (greater than 20" diameter and 23 ft. tall). Each pair requires a minimum of three snags (one for nesting and two for roosting). Recent research suggests that 60-90 snags of 20" DBH per sq. mile are required to provide for replacement and reserve snags (Evelyn L. Bull and E. Charles Meslow, 1977). A combination of green and dead trees are needed to meet these habitat requirements.

Research in the Blue Mountains of Oregon has shown that a minimum of 320 acres of mature and old growth forests are required for a pair of nesting pileated woodpeckers (Evelyn L. Bull and E. Charles Meslow, 1977). In the Gifford Pinchot National Forest Management Plan a core of 300 acres of suitable habitat is required in each 600 acre pileated woodpecker management area (Land and Resources Management Plan, Gifford Pinchot National Forest, 1990). Pileated woodpeckers require these large acreages of intact forest to forage for their preferred food source, the carpenter ant, and for other insects, such as bark beetles. To forage for these insects, this woodpecker requires trees greater than 12" DBH (Evelyn Bull, Steven Peterson, and Jack Ward Thomas, 1986). Pileated woodpeckers have been observed in the lower White Salmon corridor in an area containing old growth fir and oak.

The pileated woodpecker is listed as a candidate species on the Washington State Species of Concern List. If this species is listed by Washing-

ton State as endangered, threatened or sensitive, it will probably be added to the Region 6 Sensitive Species List.

Merriam Turkey

The mixture of croplands, fruit and seed-producing agricultural lands, and oak forest has created a rich forage base for the Merriam turkey. Introduced into the Gorge, the highly mobile turkey has survived well and expanded into other suitable lands such as the White Salmon River drainage. Spring and summer habitat are found in mixed ponderosa pine/Douglas-fir/oak stands. These forested stands, with a grass-forb understory, provide cover and debris for nesting. Oak acorns and ponderosa pine nuts are an important year-round food source. Roosting occurs on the large limbs of ponderosa pine. Food, cover, and roost sites are at a premium within the agriculturally developed countryside during the winter months. The river corridor and adjoining unaltered oak/conifer stands provide important winter habitat in the general vicinity.

MAMMALS

Pine Marten (MIS for mature and old growth forest)

Similar to the pileated woodpecker, the pine marten is an indicator for mature and old growth forest. Habitat requirements of the pine marten include at a minimum 160 acres of unfragmented forest, large diameter trees (>12" DBH), 80% canopy coverage, and down woody material. These characteristics describe minimum management standards for nesting and rearing habitat (Land and Resource Management Plan, Gifford Pinchot National Forest, 1990). Down woody material is an important component of marten winter habitat. Under this woody material, the tree squirrel, an important prey species, can be found in the winter. Marten also travel extensively above the ground on down woody material in certain snow conditions. The "shy" behavior of the marten makes it a rarely observed animal of the forest. The occurrence of marten has not been documented in the lower White Salmon corridor. The unfragmented forests in Spring

and Buck Creeks may provide potential marten habitat.

Western Gray Squirrel

Although the western gray squirrel has been observed in the project area (Cavanaugh, 1990) and the vegetation along the Lower White Salmon River has been identified as suitable habitat, little is known about its abundance.

Home ranges of the western gray squirrel have been documented at five to 15 acres. Habitat studies performed in Oregon and Washington describe the importance of mixed pine and oak forests (Barnum, 1975), a continuous canopy, availability of multiple nest sites, water in close proximity (less than ¼ mile), and abundant food. Availability of important foods (oak acorns, pine cones, and some fungi and berries) has been identified as a limiting factor in squirrel survival.

Competition from other pine and acorn consuming species has impacted the squirrel's ability to thrive within its northern range (Roderick, 1987). Recent population studies have elevated the concern for this species within the states of Oregon and Washington. The significant declines of population in Washington are thought to be the result of competition from other squirrels, habitat disturbance, and disease. The state of Washington has responded by listing the western gray squirrel as a candidate endangered, threatened, or sensitive species, and is currently managing it as a sensitive species. The Washington Dept. of Wildlife has indicated that, before reintroduction of the western gray squirrel, a comprehensive study of the squirrel's habitat requirements and reasons for its population decline would be necessary. If this species is listed by Washington State as endangered, threatened or sensitive, it will probably be added to the Region 6 Sensitive Species List.

Other Small Mammals

The early successional and agricultural lands which dominate the landscape adjacent to the river provide habitat for small mammals such as the California ground squirrel, woodrat, skunk,

racoons and coyote. These animals have learned to successfully live on developed lands in the presence of humans. Less abundant within the corridor, though reported in the the lower White Salmon River corridor, and the lateral drainages of Buck Creek and Spring Creek, is the northern flying squirrel. This species is associated with relatively large acreages of late successional coniferous or hardwood forests. The occurrence of fur-bearing animals such as beaver, mink and muskrat are unknown, though their habitat occurs within the river corridor. Populations of these species can be easily impacted by trapping, in addition to habitat alteration.

Black-tailed Deer and Elk (MIS for important game species)

One of the more conspicuous wildlife species within the river corridor is the black-tailed deer. A larger animal and much less common is the elk. Both are important hunted (game) species in the West. The private land crop fields and orchards provide highly palatable forage year round. Many of these private lands, however, are fenced and unavailable to elk and deer. The state of Washington has identified the White Salmon River drainage as providing crucial black-tailed deer winter habitat. Crucial deer winter ranges are identified along the east and west side of the river (Anderson, 1990). Oak and mixed conifer/oak stands provide food in

the form of mast and thermal cover all winter long. South facing oak communities in the areas of Buck Creek, Rattlesnake Creek, Oak Ridge and Spring Creek support large numbers of wintering deer. The vegetative cover and limited human activity in these drainages provide seasonal migration corridors. These corridors link the high elevation deer and elk summer ranges with the lower elevation winter ranges. In severe winter conditions the undisturbed and unaltered forested habitat of the river canyon is heavily used by deer, providing both thermal cover and forage. State deer management objectives include maintaining herds at a level to provide for hunting and non-consumptive recreational opportunities, while minimizing depredation to privately owned orchards and croplands.

Other Large Mammals

Bobcats, mountain lions, and black bears occur in the Columbia River Gorge and may occasionally appear along the White Salmon River. All three species are managed as game species in Washington. The black bear is a generalist in its eating habits, and could survive well in the fruit and farm lands of the river valley, if tolerated. These three species travel over large areas, occasionally feeding on livestock, fruits and other agricultural products, and therefore do not fare well in the presence of humans.

Figure III-3: Documented and Suspected Animal Species on the Region 6 Sensitive Species List

SCIENTIFIC NAME	COMMON NAME	STATUS	OCCURRENCE
<i>Haliaeetus leucocephalus</i>	northern bald eagle	Threatened	Documented
<i>Histrionicus histrionicus</i>	Harlequin duck	R-6 Sensitive	Documented
<i>Falco peregrinus anatum</i>	American peregrine falcon	Endangered	Suspected
<i>Strix occidentalis caurina</i>	northern spotted owl	R-6 Sensitive Threatened	Suspected
<i>Clemmys marmorata marmorata</i>	northwestern pond turtle	R-6 Sensitive	Suspected
<i>Plecotus townsendii townsendii</i>	Pacific western big-eared bat	R-6 Sensitive	Suspected
<i>Plethodon larselli</i>	Larch Mountain salamander	R-6 Sensitive	Suspected

In addition to the species on the Region 6 Sensitive Species List, several species which are documented or suspected to be in the White Salmon River area are listed as candidate species on the Washington State Species of Concern List. If these species are listed by Washington State as endangered, threatened or sensitive, they will

probably be added to the Region 6 Sensitive Species List. These species are:

- western gray squirrel - *Sciurus griseus*
- Vaux's swift - *Chaetura vauxi*
- Lewis' woodpecker - *Melanerpes lewis*
- pileated woodpecker - *Dryocopus pileatus*
- northern goshawk - *Accipiter gentilis*
- western bluebird - *Sialia mexicana*

SPECIAL HABITATS

CANYON ECOSYSTEM

The talus rock slopes of the river canyon constitute a special environment. This landscape has probably received minimal disturbance through time and, thus, exemplifies the least altered plant and animal communities in the drainage. Wildlife, such as great horned owls, salamanders, pika, marmots, woodrats, Pacific western big-eared bats and the little brown bats, meets important life needs (hibernation, nesting, foraging) in this predominantly rock environment. Within the splash zone of the river, plant communities unique to these habitat conditions (including particular ferns and mosses), enrich the diversity of this zone. The ecological ties between rock and plants and animals is little understood and warrant its utmost conservation. Should this environment be altered, it may prove difficult and economically impractical to recreate (Maser, et al., 1979 b).

The Larch Mountain salamander, endemic to the Columbia River Gorge, is managed as a sensitive species by the Forest Service in R-6. This species is documented as occurring on the neighboring Gifford Pinchot National Forest and along the Columbia River Gorge. Habitat requirements of the salamander are quite specific, including steep, wooded talus slopes where rocks range from about ½ to 2½ inches in size, and a relatively large amount of decaying material (Herrington, et al., 1985). Although talus slopes in the river canyon are not believed to meet the salamander's habitat requirements because of the large size of rock, the entire river boundary would benefit from an inventory of this species.

WETLANDS

The northwestern pond turtle, another sensitive species in Region 6 has been documented on the neighboring Gifford Pinchot National Forest. Habitat is described as quiet water with rocky or muddy bottom and aquatic vegetation. Rivers, creeks and ponds provide primary feeding and resting habitat. The northwestern pond turtle

lays its eggs in sunny locations some distance from water (Brown, et al., 1985). The fast current of the White Salmon River restricts the distribution and number of aquatic plant communities in the river. However, a complete inventory of the northwestern pond turtle within the White Salmon River boundary should be completed.

BIOLOGICAL DIVERSITY

As the term implies, biological diversity describes the variety of life in an area. Diversity can be studied at the genetic, species, ecosystem, and landscape levels within a geographic region. Variables used to define diversity include the number and types of different plants and animal species, and the functional and structural diversity within plant communities. The discussion of diversity must include land types and plant and animal populations that extend beyond the designated river boundary. Some species require very large habitats, while others only need small areas. Some species are very exacting in their habitat needs, while others can tolerate a more flexible habitat. The biological diversity is a result of rich habitat diversity. For plants, this habitat diversity is determined by diversity in the environment (hydrologic, geologic/topographic, weather, and soil conditions). For animals, this habitat diversity is determined by the plants, as well as the environmental diversity.

Inadequate knowledge and resources preclude our ability to manage for and inventory all individual plant and animal species. Therefore, in attempting to measure the degree of biological diversity present, certain concepts or measurable entities were developed that represented a large number of species and, thus, a high level of diversity. The following concepts were used:

Physical Environmental Conditions - Areas identified as having a large diversity in hydrologic, geologic/topographic, meteorologic (weather), and soil conditions are areas most likely to support higher diversity of plants, of habitats, and therefore, of biological diversity.

Vegetative Communities and Structure -

Diversity can be addressed through vegetative communities, for example, grasslands or coniferous woodlands. It also can be addressed through vertical and horizontal structure of the communities; for example, a grass meadow expresses less vertical diversity than a multi-canopied forest, while a combination of a riparian area with grass meadows in a coniferous forest expresses greater horizontal diversity than an area of uniform coniferous forest. Plant succession (the predictable change in composition of plant species and growth forms, over time, in response to modification of environmental conditions, i.e., succession from weeds to grasses to shrubs to trees, in that order) is a process relating vegetative communities to vegetative structure. Areas identified as having a large variety of vegetative communities and/or structure, are areas likely to support a high degree of biological diversity.

Management Indicator Species (MIS) - A

single species (or group of species) called a management indicator species (MIS) is selected to represent a whole set of species that require the same set of habitat conditions. Thus, managing for the MIS will result in management for those species with similar habitat requirements as well. For example, the Gifford Pinchot National Forest uses the pileated woodpecker and pine marten as indicators of older, mature coniferous forest habitats. Areas that are known to contain MIS are likely to support the many other species which that MIS represents. Thus, a MIS becomes a measure of biological diversity.

In applying these concepts it is possible to obtain a rough estimate of the potential biological diversity present in the White Salmon River drainage. The location of the White Salmon

River is geographically situated in an area of high environmental diversity. The Columbia River Gorge is a low elevation corridor linking the wet west Cascade environment to the drier east Cascade environment with rapid elevation gains creating diverse environmental conditions. The White Salmon River is located just on the east side of the Cascade mountains where these environmental conditions are changing most rapidly due to the predominant winds and the rain shadow created by the Cascades.

As a result of its location, the coniferous vegetation along the White Salmon River intermingles with the Oak/pine/grassland and the riparian vegetation along the river. Adding to this is the mosaic of land types and uses found along the river which create a multitude of edges between orchards, forest, shrublands, meadows, riparian areas, and farmlands (see Figure III-4 and the Land Uses Map in Land Ownership and Uses in this Chapter). Finally, the presence of at least some mature and old growth communities is confirmed by the documented presence, within the river boundary, of the pileated woodpecker, a MIS for these communities. This unusual diversity in vegetative communities, structures, and habitats brings together a wide variety of different species that under more usual circumstances would not intermingle. Consequently, the White Salmon River would be expected, theoretically, to show high biological diversity.

However, when comparisons are made related to successional differences, diversity is not as apparent. Most (81%) of the vegetational landscape and land uses within the lower White Salmon River corridor are expressions of early to middle ecological successional stages such as forb/grass meadows or shrub fields (See Figure III-4 and the Land Uses Map in Land Ownership and Uses in this chapter).

Figure III-4: Land Types/Uses Within the Lower White Salmon River Corridor (½ mile on each side of the river)

LAND TYPES/USE	ACRES	% OF TOTAL AREA	SUCCESSIONAL STAGE
Building/Rural community	376	6.7	Early
Hayfields/Agri-lands	1,276	22.7	Early
Orchard	219	3.9	Early
Talus/rock	5	0.1	Early
Natural Grass Meadows	20	0.3	Early
Grass/shrubfields	55	1.0	Early/Middle
Natural shrubfields	5	0.1	Early/Middle
Non-forested riparian	232	4.3	Early/Middle
Non-forested wetlands	25	0.4	Early/Middle
Forest lands			
Tree Diameter Class less than 19"	2,208	40.7	Middle
Tree Diameter Class more than 19"	1,193	18.6	Middle/Late

CULTURAL RESOURCES

HISTORY

The White Salmon River valley is likely to have witnessed the passage of people over a period of 6,000 to 10,000 years. Although no archaeological research has been conducted in the valley, radiometric determinations to the southeast at The Dalles, and to the north at Layser Cave, provide dates bracketing this period (Masten and Galm, 1989). As an attractive conduit lined with abundant natural resources, the White Salmon River would have attracted peoples traveling from the Columbia River to the high country. After the first historic non-Indian intrusions into the area, beginning in 1805, the same attraction of natural access and resource opportunity led to the succeeding uses of homesteading, logging and agricultural development which have shaped the modern environment of this area.

From what is known of the ethnographic uses of the lower White Salmon River, the area was the contact point between two separate linguistic groups: the Sahaptin-speaking Klickitat and the Chinookan-speaking Wishram. The hypothesized boundary was in the vicinity of Husum Falls; the Klickitat were upriver and the Wishram downriver. In reality however, "boundaries" were fluid and not maintained. Although the languages were of different linguistic stocks, most persons were undoubtedly conversant in both, due to proximity, shared resource use, and intermarriage.

Euro-american contact in the area first occurred in October of 1805, when the Lewis and Clark party passed the White Salmon River, and named it "Canoe Creek". Prior to their arrival, however, the influence of non-Indian maritime fur traders at the mouth of the Columbia, 168 miles down river, had already made its presence in the form of trade goods and disease. Epidemic diseases, particularly smallpox, were introduced in the 1770s and continued to decimate the population for nearly 100 years (Masten and Galm, 1989).

Other than the 1805 visit of Lewis and Clark at the mouth of the White Salmon River, no documented exploration by non-Indians in the area is known until 1853, when the McClellan party passed through the area of Trout Lake during a survey for a railroad route. The Trout Lake valley was settled by a Swiss family in 1880; by 1887 12 families were living in the area. A post office was built in 1887, with mail deliveries once a week between Trout Lake and White Salmon. A road was started from White Salmon in 1882, with a stage line starting in 1893. The Mt. Adams Orchard Company at Husum was started in 1909, eventually becoming what was claimed to be the world's largest winter pear orchard in 1938. The orchard industry has declined in recent years, reportedly due to market conditions (McCoy, 1989). In response to this decline, local agricultural practices have diversified into alfalfa hay, grain crops and pasturage of livestock. At the present, approximately 80 acres of orchard and 400 acres of field crops and pasture are within the river boundary.

Logging was an important early influence within the area. The 1882 road construction was largely in response to the need to acquire timber for the growing population on the Columbia River. As logging roads created access into the White Salmon River country, subsequent agricultural development, such as livestock and orchard plantings, occupied the cleared lands. The present cultural landscape of the White Salmon River valley is a continuation of these early establishments which capitalized on the availability of cleared lands.

Rollaway log dams were developed along the White Salmon River for transporting logs down to the Columbia River. Several camps of the Menominee Lumber Company of Michigan were located within the river valley. By 1910-1920 other lumber companies took over, and logging grew during the 1920s as a major exploitative activity (McCoy, 1989). Logging remains a major activity in the valley, although agricultural

pursuits and the developing recreational industry are increasing.

IMPORTANT CULTURAL SITES

Despite the lack of systematic archaeological fieldwork in the White Salmon River valley, four important American Indian sites are known. Many more significant spiritual and prehistoric sites are likely to be present. Areas of traditional use are also likely to be documented in the event of archival and oral history research. There has not been any inventory of potentially significant historic structures. It is likely that some significant structures would be located by a historic buildings inventory.

Klickitat County has recently been examining the feasibility of preserving the old metal bridge, located a short distance downstream from the present highway bridge at Husum Falls, for adaptive re-use. It has also developed the Weldon Wagon Trail, which goes from Husum towards Mountain Brook, for its local paths and trails system.

Informal archaeological fieldwork has been conducted in the area since 1983. One ethnographic site has been recorded in the Husum area. Several others were discovered, but unrecorded, through this informal fieldwork. During the preparation of the archaeological overview for the lower White Salmon River, an approximate 10% sample survey coverage was given to the study area. This sample was not random, due to constraints of access. Consequently, the results cannot be used to generate statistically valid projections of potential site distributions within the study area.

One result of the archaeological survey was that two previously unrecorded sites, one prehistoric and one historic, were discovered and recorded. The historic site appears to be the remnants of a recent structure. The prehistoric site appears to represent a campsite and tool-manufacture site (Masten and Galm, 1989).

Previously-known sites include the Indian homestead allotment of Jacob Hunt, a contemporary of Smohalla of Priest Rapids, and the historic Indian cemetery that contains his remains. This cemetery is still in use. The Jacob Hunt site is a significant property which will require additional research to fully document its significance to the local Indian people and the Yakima Indian Nation, as well as to the history of the area.

The reported ethnographic site of the Klickitat at Husum Falls has not been located or formally recorded. This area is reported to have been a significant dip-net fishery prior to the construction of Condit Dam, which prevents any runs of anadromous fish due to the lack of provision for fish passage.

The potential for significant historic structures is largely unknown. It is expected that eligible historic properties will be located in the event of a comprehensive inventory, due to the relatively slow pace of development and stable pattern of landholding in the area over the years.

TREATY RIGHTS

There is documentary evidence that the White Salmon River up to Husum Falls supported a traditional fishery (Lane, Lane, and Nash 1981). The topography and flow of the river at Husum is consistent with other known places of dip net fishing, such as the Klickitat River above Lyle and Sherars Falls on the Deschutes River.

The members of four tribal governments exercise reserved treaty fishing rights at "usual and accustomed" fishing sites on the Columbia River and its tributaries, including the White Salmon River. These reserved rights are specifically addressed in the treaties of 1855 with the Confederated Tribes and Bands of the Yakima Indian Nation (Treaty with the Yakimas, June 9, 1855, 12 Stat. 951), the Confederated Tribes of the Warm Springs Reservation of Oregon (Treaty with the Tribes of Middle Oregon, June 25, 1855, 12 Stat. 963), the Confederated Tribes of the Umatilla Reservation of Oregon (Treaty of June 9, 1855, 12 Stat. 945), and the Nez

Perce Tribe of Idaho (Treaty with the Nez Perce, June 11, 1855, 12 Stat. 957).

It is important to note that these rights were reserved by, not granted to, the treaty tribes. In essence, the "right of taking fish at all usual and accustomed places" guarantees that members of the treaty tribes shall have the right of access to, and fishing from, all salmon and steelhead-bearing locations on the Columbia River as well as its tributaries, including the White Salmon River. Although the anadromous runs were exterminated on the White Salmon River above the Condit Dam shortly after its construction in

1914, the right to fish was not extinguished, so the Yakimas' right to take fish above Condit Dam is still in effect.

Since the White Salmon River is within the ceded lands of the Confederated Tribes and Bands of the Yakima Indian Nation, and because anadromous runs of fish, as well as the harvesting of those fish at Husum Falls, have been documented, some form of treaty fishing could occur as a result of reintroduction of anadromous fish. This could involve erection of fishing scaffolds and use of dipnets, which could interfere with recreation boating use.

American Indians stressed the importance of the area for traditional spiritual, ceremonial, and gathering uses



Other rights reserved in the treaties of 1855 include the right of erecting temporary buildings for curing fish, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land.

There are no known or implied treaty-reserved, off-reservation water rights of the Yakima Indian Nation on the White Salmon River. If such rights potentially exist, they have not been adjudicated.

TRADITIONAL USES

A comprehensive oral history, archival and site inventory have not been completed. Therefore, the extent and location of areas traditionally considered sacred or spiritual are unknown. Likewise, other areas used for gathering traditional food and medicinal plants, as well as raw

materials for practices such as basket-making, remain unknown.

However, throughout the planning effort, representatives of the Yakima Indian Nation and the River People stressed the importance of this area for traditional ceremonial, spiritual and gathering uses (Jackson & Speedis, 1989). Husum was the site of an ethnographic village, and a large number of Indian Homestead Allotments were granted to American Indians in this area. This past activity indicates that the area had the ability to sustain a large sedentary population from the natural resources at hand. The extensive modification of the valley over the last 100 years has had a significant effect on local natural resources, such as camas. So, even though there is no specific documentary evidence of traditional uses within the designated river corridor, it is thought that archival and oral history research is likely to reveal such use.

The White Salmon River is considered one of the premier day-use rivers in the region



RECREATION

INTRODUCTION

The lower White Salmon River has the potential to provide a variety of recreation opportunities. However, since the majority of land within the river corridor is privately owned, current recreational use is centered around whitewater boating on the river. Boating access is available to the general public only at one privately owned launch site in BZ Corner and from seven acres of land recently acquired by the Forest Service immediately above and below Husum Falls.

Much of the land within the river corridor is in small parcels used for agricultural, timber, and residential purposes and is not available for public recreation. The remaining area is forested and recreation activities could occur, but only with permission of landowners. The Forest Service has acquired 38 acres of forested land on the east side of the river between Husum and BZ Corner in addition to the seven acres adjacent to Husum Falls.

The area within the existing river boundary contains elements of several classes in the Recreation Opportunity Spectrum (ROS). A summary of the ROS is given in Chapter II. The following are examples of how the different recreation opportunity classes are represented within the existing river boundary:

Semi-Primitive Non-Motorized - While the area within the river corridor is too small to meet the definition of remoteness, there is relatively little evidence of development within large portions of the river canyon. In many stretches, the environment appears natural and the concentration of users is low. This is particularly true from Gilmer Creek to about two miles below BZ Corner. Whitewater boating on the river provides a high level of challenge with some risk. Also, the lack of facility development and the difficulty of put-in are consistent

with the semi-primitive recreation opportunity class.

Roaded Natural - Much of the area is characterized by a predominantly natural-appearing environment, with moderate evidence of the sights and sounds of people. Resource modification practices are evident, but harmonize with the natural environment, and motorized use is allowed. The roaded natural opportunity class is well represented along the Oak Ridge Road and portions of the Spring Creek Road. These areas appear natural as viewed from the roads.

Roaded Modified - Portions of the area provide opportunities for solitude, but are still within easy access of roads. Whitewater river trips fit this opportunity class, as do some of the undeveloped locations including Spring Creek, Rattlesnake Creek and the northeast area within the river boundary. Some places within the boundary show substantial modification of the natural environment, including recent clearcuts on the west side of the river between Husum and BZ Corner.

Rural - Much of the river corridor meets the criteria for a rural opportunity class. This modified environment includes small farms, fields, and orchards mixed with natural appearing stands of trees. A good example is the area between Husum and BZ Corner on the east side of the river.

WHITEWATER BOATING

Whitewater boating occurs on the river in the form of rafting and kayaking with a minor amount of inner-tube, canoe, and drift boat use (Fig.III-6). It is considered one of the few premier day-use rivers in the region offering a semi-primitive experience, and whitewater recreation was found to be an outstandingly remarkable value (Land & Water Associates, 1989).

Figure III-6: Types of Crafts Used by All Boaters

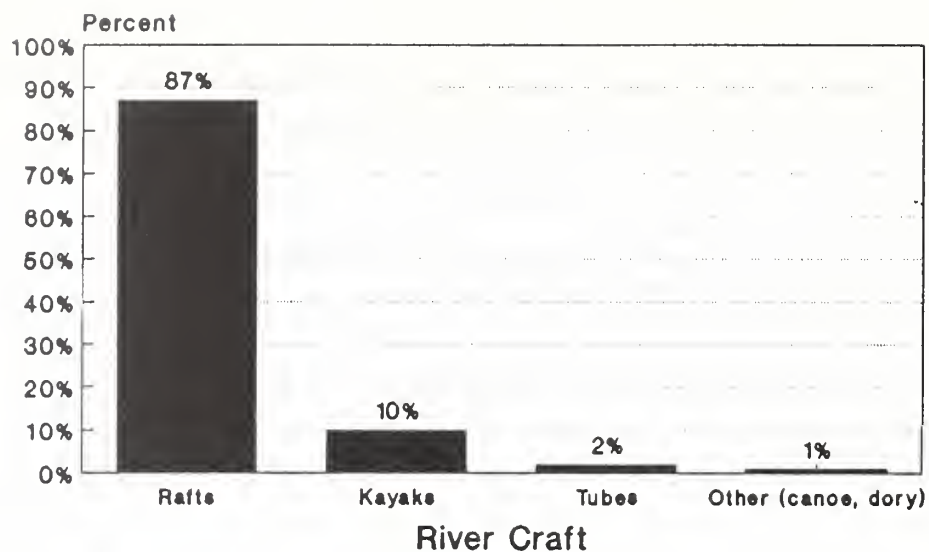
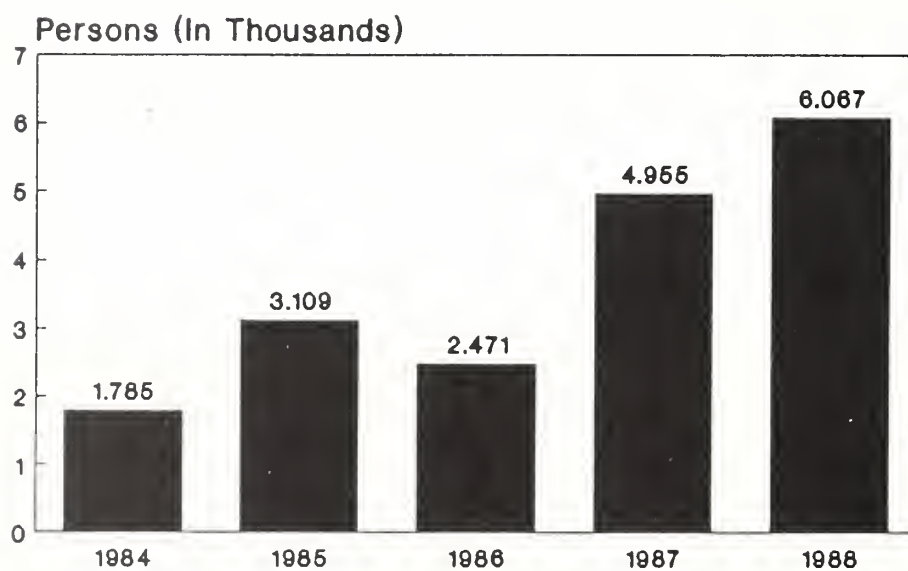


Figure III-7: Recreation Use Estimates 1984-1988



Most trips begin at the community of BZ Corner (RM 12) and end at Husum (RM 7.5) or Northwestern Lake (RM 5). Boaters pass through a narrow, steep-sided gorge for part of the trip, with forest, orchards and farmland above. The entire trip is very scenic and natural looking, with views of steep-sided slopes of the gorge and tree-covered shorelines.

Figure III-8: Swiftwater Rating System

Class I - Moving water with a few riffles and small waves. Few or no obstructions.

Class II - Easy rapids with waves up to 3 feet and wide, clear, channels that are obvious without scouting. Some maneuvering is required.

Class III - Rapids with high, irregular waves often capable of swamping an open canoe. Narrow passages that often require complex maneuvering. May require scouting from shore.

Class IV - Long, difficult rapids with constricted passages that often require precise maneuvering in very turbulent waters. Scouting from shore is necessary, and conditions make rescue difficult. Generally not possible for open canoes. Boaters in covered canoes and kayaks should have the ability to Eskimo roll.

Class V - Extremely difficult, long, and very violent rapids with highly congested routes, which always should be scouted from shore. Rescue conditions are difficult, and there is significant hazard to life in the event of a mishap. Ability to Eskimo roll is essential for boaters in kayaks and decked canoes. Unsuitable for open canoes.

Class VI - Difficulties of Class V carried to the extreme of navigability. Nearly impossible and very dangerous. For teams of experts only, after close study has been made and all precautions have been taken. Unsuitable for open canoes.

Segerstrom, et al, 1983.

The river between BZ Corner and Husum drops rapidly (45-50 feet/mile) and is noted for the frequency of class II and III rapids (see Figure III-8 for a description of the rating system for rapids). There is an eight-foot waterfall at Husum down which most rafters line their craft. Some kayakers and a few rafters do run the falls at certain water levels. Below Husum the river has fewer and smaller rapids (class I & II) and is

mostly forested. The trip between BZ Corner and Northwestern Lake takes between two and one-half and three hours by raft. Because of the relatively short distance (7.5 miles) and the adjacent private lands, overnight trips normally do not occur.

USE PATTERNS

The river is spring fed, and is noted for its consistent water levels. Boating opportunities exist nearly year-round. *Washington Whitewater* recommends running the river for the first time between 800 and 1300 CFS but mentions possible runs of up to 2400 CFS (North, 1988). Commercial outfitters have conducted floats at flows as low as 400 CFS, (Zoller, 1989).

Whitewater boating is relatively new to the White Salmon. The river was "discovered," about ten years ago. Boating use information has been recorded by the principle cable launch operator at BZ Corner and by the caretaker at Northwestern Lake since 1984. In addition, sample surveys of boating use were conducted in 1988 and 1989 by the Forest Service.

Overall use has been increasing about 20 percent each year since 1984, from around 2000 visits in 1984 to over 6000 in 1988 (Fig.III-7). Most use (75%) occurs between June 1 and the Labor Day weekend (Fig.III-9). The remainder of use, while only 25%, is significant in that it occurs when other rivers have either too much or too little water to be used (Allen & Ratcliffe, 1988).

The majority of use in mid-summer (87%) is by rafters, with kayak, canoe and drift boat use comprising the remainder (Allen & Ratcliffe 1988). Drift boat use occurs between Husum and Northwestern Lake. Accurate data for kayaking is not available for early and late season use, but it is likely that the proportion of kayak use is greater during these periods.

Distribution of use during the week varies between commercial and private groups. About 77 percent of commercial use occurs on weekends, while non-commercial use is divided more evenly throughout the week.

Figure III-9: Recreation Use Estimates by Month

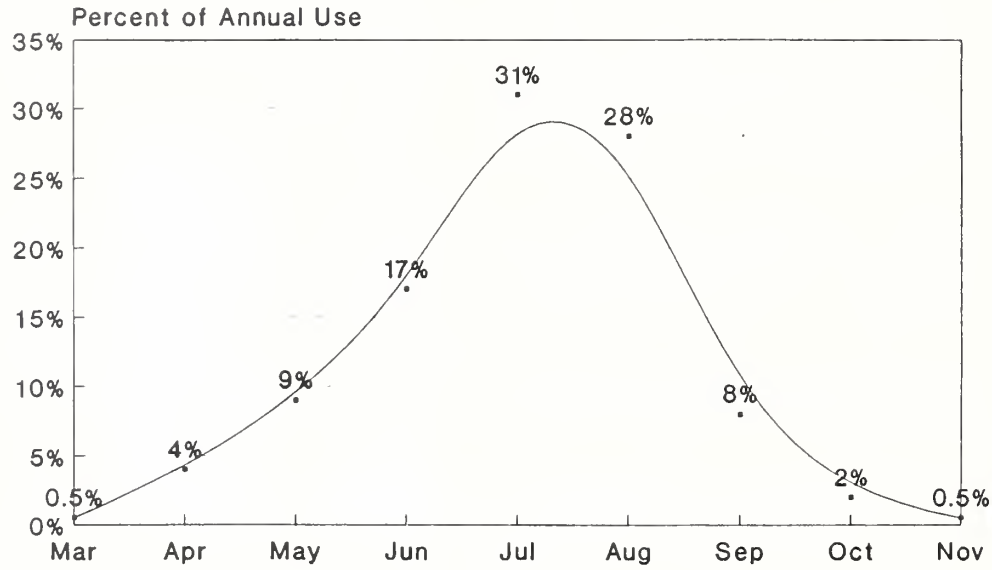
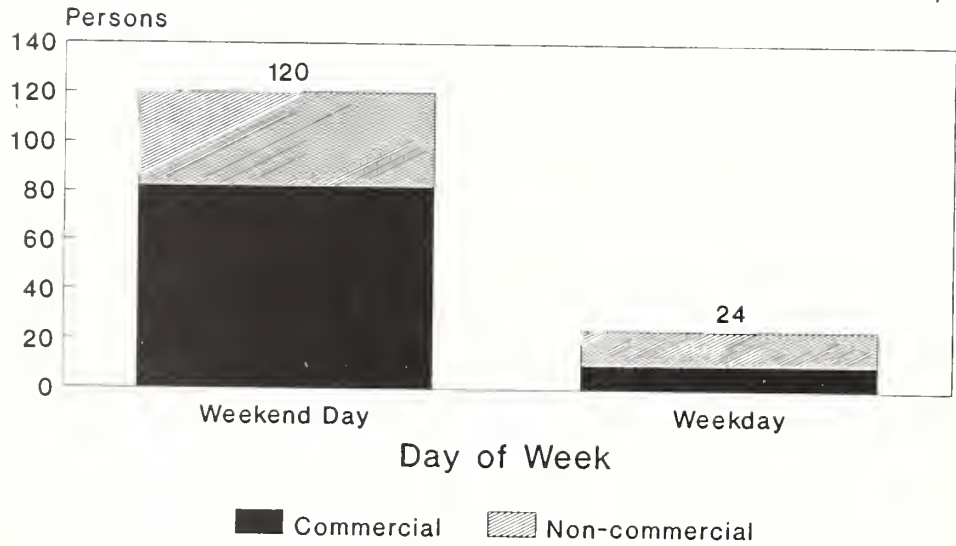


Figure III-10: Average Daily Use Estimates



Group size for raft parties also differs: an average of six for private groups while commercial party size is typically between 8 and 24, and sometimes higher. Commercial groups tend to have more people in each raft, with an average of nearly seven, while private rafts average four people. There were about 20 commercial companies operating on the river in 1988 and 98 percent of their use was with rafts (Allen & Ratcliffe, 1988).

On weekend days from mid-July to mid-September in 1988, an average of 120 people ran the river each day. About 80 were on commercial trips and 40 were private trips. Use on weekdays was much lower: average use was

24 individuals, including 10 commercial and 10 private rafters and 4 kayakers (Fig.III-10, Allen & Ratcliffe, 1988).

Federal regulations require special use permits for any commercial activity occurring on national forest land and on the waters of National Wild and Scenic Rivers. A special use permit for commercial use of the White Salmon River was first required by the Forest Service in 1990. During the 1991 use season, there were a total of 15 outfitters/guides holding special use permits. Three of these are located in the White Salmon River valley, with the remainder based outside the local area.

On weekend days from mid-July to mid-September, 1988,
an average of 120 people ran the river each day



Rafters Lining Husum Falls



"Husum Days," which traditionally is held over a weekend in early July, is a competitive racing event on the White Salmon River. Well over 100 kayakers and canoeists compete in down-river, wild-river, and slalom events. The popular slalom race is held just below Husum Falls, and numerous people gather to watch the competition from the river banks, bridge, and road.

SAFETY

Although boaters are generally within one-quarter mile of a road while on river trips, the rugged character of the gorge for much of the trip creates significant safety concerns. Prior to 1991, only

one boater death had been recorded, and this above the normal launch point (Zoller, 1989). However, the occurrence of mishaps seems to be increasing. Most incidents are associated with recreation users who are unaware of the hazardous nature of the river or who overestimate their abilities. The death of a rafter in the Spring of 1991 during very high water seems to fit that pattern.

Gaining access to the river at BZ Corner can present hazards, although the commercial cable launch facilities remove much of the risk. Husum Falls, a Class V rapids, is also hazardous and most commercial guides recommend lowering

rafts by rope with passengers and crew walking around. Some rafters and a considerable number of kayakers do run Husum Falls at certain water levels.

Because of the steep gradient of the river between BZ Corner and Husum, the rapids are closely spaced and in some instances do not allow much time to recover and prepare for the next one. Few eddies or scouting opportunities exist for rafters. The rapids in the portion between Husum and Northwestern Lake are more spread out and the hazards are less. A positive factor along this whole stretch of river is that boaters who do get into trouble do not have far to hike for assistance, either to the highway or to nearby residences.

Because the river receives much of its water from springs, it is very cold year-round. Additionally, the steep banks of the gorge shield sunlight for much of the trip. Boaters, especially on early and late season trips, must be prepared for these cold conditions and hypothermia is a safety consideration. Wet or dry suits are recommended

on cooler days and dry clothes are welcome at the trip's end.

An additional hazard exists as a result of sightseers at the State Highway 141 bridge crossing to watch the falls and boaters. The concern is that a sightseer could become careless and step in front of a passing high-speed vehicle. The lack of adequate parking near the falls also presents a hazard as some sightseers and river runners park along the highway in unsafe areas.

West Klickitat SAR is a registered non-profit group in the State of Washington and is affiliated with, and recognized by, the Klickitat County Sheriff's Department. Although Klickitat County has ultimate search and rescue responsibility in the county, the intent is to have West Klickitat SAR respond to white water search and rescue incidents on the White Salmon and Klickitat Rivers. Klickitat County, along with the West Klickitat SAR, is preparing a safety plan with assistance from the Forest Service and local guides.

Highway 141 Bridge at Husum Falls



Cable Launch at BZ Corner



ACCESS AND FACILITIES

Until recently, there were no publicly-owned access points on the designated section of the river. In 1989, the Forest Service purchased seven acres surrounding the falls in Husum providing public access to the river and guaranteeing access around the falls.

Because of steep canyon walls, there is no motorized access from the rim to the river. However, there are three privately owned and operated launch sites in the BZ Corner area, each using a cable drop system to lower rafts from the canyon rim to the river below. Most

raft parties use the launch site just north of the bridge at BZ Corner. A fee is charged for this service. Two of the launch systems were permitted by Klickitat County in 1989--the third is not recognized as a public launch site by the county. Because of steep and rugged topography and limited suitable river banks, opportunities for additional safe launch sites are few.

Public roads cross the designated river segment at Husum (State Highway 141 and the old metal bridge), BZ Corner (county road to Glenwood), and at Northwestern Lake. Except for the bridges in Husum, there is no publicly owned land at these crossings. The area around the Husum

crossing was recently acquired by the Forest Service, but parking is very limited, making access to the river difficult. One privately owned bridge crosses the river between BZ Corner and Husum; it is not open for public use.

Boaters normally leave the river at either Husum or Northwestern Lake. A relatively small number of river users, mostly canoeists and anglers, begin their trip at Husum and exit at Northwestern Lake. The take-out point at Northwestern Lake is owned by the Pacific Power Company. The company operates a small picnic area at the lake and allows boaters to take out at the site. The take-out site has a boat ramp and some crowding problems have occurred during busy periods. The area was converted to day-use-only in 1990.

There are no campgrounds or picnic areas within the existing river boundary. The closest campgrounds are on the Gifford Pinchot National Forest, about 20 miles north. The picnic area at Northwestern Lake is just below the designated river boundary. The site is limited and the company is studying the need to improve it. There is demand for overnight facilities in the White Salmon River valley but the public generally agrees that such a service should be located outside the existing river boundary. There is also a desire by some people for one or two rest/launch stops for boaters between BZ Corner and Northwestern Lake.

There are public restrooms at the main public launch site in BZ Corner and at the take-out at Northwestern Lake. However, the restroom at Northwestern Lake is substandard and there is a need for improved facilities. Prior to the time that there was publicly owned land along the river, boaters had to take rest stops on the shoreline or at Husum. Some private landowners have complained about trespass by boaters. Portable toilets were installed on the public land in Husum beginning in the 1990 season.

OTHER RECREATION OPPORTUNITIES

Because the area is nearly all privately owned, it is difficult to estimate how much and what types of recreation use occurs other than whitewater boating. Minor amounts of hunting, hiking, nature study and riverbank fishing do take place, sometimes without permission of landowners.

HIKING AND NATURE STUDY

There are no hiking trails within the existing river boundary. The area on the east side of the river from RM 9.5 to 11.5 is largely undeveloped and has the potential for a longer hiking trail through a forested area. The west side of the river between Husum and Northwestern Lake has similar potential. The old Weldon Wagon Trail connects with the designated river boundary near Husum and some interest has surfaced to extend this along the river. This trail is part of Klickitat County's Paths & Trails system.

Klickitat County also recognizes Highway 141 and the Oak Ridge road as potential bicycle paths. There is an increasing amount of bicycle use on Highway 141 between Husum and BZ Corner. Concerns about safety have prompted a number of people to support establishment of a bike path along or parallel to Highway 141.

FISHING

The river supports a good population of rainbow trout and is noted for its trophy fish. Access has been limited and, therefore, fishing pressure has been light. Some fishing occurs by boaters and bank anglers. There is the possibility that salmon and, or steelhead could be reintroduced above Condit dam (see Appendix C).

PUBLIC INFORMATION/INTERPRETATION

Little information was available to the visiting public before the White Salmon was designated a National Wild & Scenic River. Since designation, the Forest Service, with assistance of interested

citizens, has prepared a brochure containing guidelines for safe boating and information on the history of the area and the private land within the corridor. The brochure is available at bulletin boards at the BZ Corner launch site, Husum roadside, the take-out at Northwestern Lake, and from local guides and other businesses. The primary objectives of the brochure are to inform boaters about private land and safety concerns.

OTHER ISSUES

The Wild and Scenic River designation does not give the public the right to use or trespass on private land. However, many landowners believe designation will attract more people to the area and that recreationists will perceive that designation has provided access and use of land within

the corridor. State laws give liability protection to private landowners in regard to trespass. With designation, there is the potential to manage visitor use and minimize impacts to private property.

Litter, noise, and potential wildfire are also concerns of landowners. Some fires have been caused by recreationists, and some litter results from recreational use, as well. Landowners report that debris and evidence of human waste are already evident in some areas along the White Salmon River. However, during river cleanup efforts conducted in 1989 and 90, it was noted that a large portion of litter collected was household trash, including discarded refrigerators. Residents of the area report that due to lack of facilities, the river corridor has been used as a garbage dump by some residents of the area.

LANDSCAPE CHARACTER

CURRENT CONDITIONS

GENERAL

Landscape character is the distinctive appearance of a land area which is created by the aggregate of the physical features which are present, including those caused by humans. The landscape character of an area may appear to be different depending on the location from where it is viewed. This is the case for the lower White Salmon River valley where the view from the river is markedly different from the view from Highway 141. For a complete understanding of the landscape setting of the designated portion of the White Salmon River area, it must be described from three perspectives:

- A general overview of the visual landscape character of the corridor within which the river flows. (This is necessary because the actions called for in the different alternatives will have effects on the landscape both inside and outside the boundaries.)
- The view from the surface of the White Salmon River, such as would be seen by a boater, angler, etc., and
- The view from State Highway 141, the route which traverses the length of the valley, and which is the primary access for people who are going to use the river.

GENERAL OVERVIEW

The lower White Salmon River valley is a mosaic of agricultural fields, orchards, recent timber harvest blocks, and forest. Most agricultural fields are in close proximity to the river (generally within ½ mile), where the landforms are most gentle. Others are located some distance away on isolated flats and are completely enclosed by forest. Vegetation types were inventoried in the area which lies within about ½ mile of the river (see the Land Uses map in the section on Land

Ownership and Uses in this Chapter). Figure III-11 shows the percentage of land in the major visual landscape components which create the scenic mosaic.

Figure III-11: Major Components of the Visual Landscape

Landscape Component	Per Cent
Forest	59
Orchard	4
Agricultural Fields	23
Non-agricultural openings	7
Buildings	7

The White Salmon River appears as a narrow ribbon running the length of the valley. The river itself is not easily seen in many places because of its narrowness and the depth of the gorge through which it flows. Its presence is most obvious due to the forest vegetation left between it and the agricultural lands cleared on the gentle ground above the steep banks. Also, the sparkle of whitewater is obvious in many places along its length.

Several major roads are present, most notably State Highway 141, and the Gilmer Creek Road. Highway 141 on the west side and the Oak Ridge Road on the east side parallel the river north of Husum.

There are a number of buildings present, generally scattered throughout the valley, with most in fairly close proximity to Highway 141. The largest concentrations are in the communities of Husum and BZ corner.

The slopes which form the sides of the valley are generally not extremely steep, and are primarily covered with forest. Most of the forest vegetation is coniferous, but there are also stands of pure oak and mixtures of oak and conifers where the oak predominates. There is also evidence of timber harvest, both clearcut and partial cut.

VIEW FROM THE RIVER'S SURFACE

The view up and down the river in many places is enclosed in a tight frame created by a steep, narrow gorge. In addition to the topographic barrier, there is also dense vegetation along much of the river bank. In most locations where the topography does not block the view to the side, the vegetation does, thus eliminating a view of the surrounding landscape. In many cases, particularly in the upper stretches of the river where the gorge is deepest and most pronounced, the view to the side is less than 50 feet from the edge of the stream. In most of the remaining area, the view is limited to less than 200 feet. In only a few places is it possible to see more than a few hundred feet.

Along much of the river, the banks are composed of steep, often vertical, basalt cliffs from 10 to 50 feet high. This creates a small but spectacular, natural appearing gorge. Vegetation varies considerably, including moist banks of maiden hair fern, dry slopes where there is little but ground vegetation, areas of large conifers, and other locations where there are only deciduous trees. Although many people feel that the gorge is unique and beautiful, it was not determined to be outstandingly remarkable. This is because there are other gorges in the region which are more spectacular, for example, Wind River.

There is not much human development visible from the river, and most of that is not very noticeable. Probably the most visually dominant structures are the four public and one private road bridges that cross the river. Of much lesser visual importance are a number of cable and water pipe crossings, and one foot bridge. There are a number of spring boxes and pump buildings adjacent to the river, and they vary dramatically in their visibility and contrast with the natural scene. Highway 141 is visible in a couple of locations in the immediate vicinity of Husum. Cleared agricultural fields and orchards are visible in a number of places, usually through a screen of vegetation. In addition, a number of buildings are visible from the river - in the community of Husum, a cluster of houses at the head of Northwestern Lake, and five other residences scattered along the rest of the river.

VIEW FROM STATE HIGHWAY 141

The views of the White Salmon valley from Highway 141 are in marked contrast to the view from the river. They are quite open and can best be described as rural or pastoral scenes. The most striking impression of the foreground area is the contrast of the intermixed agricultural fields, pastures, orchards, and forest. There are also quite a number of buildings visible from the highway, particularly in the communities of Husum and BZ Corner, among which are a number of commercial establishments.

Except in Husum and at a location a short distance north of Husum, the river is not visible to the traveler on the highway. Husum Falls, the largest of the drops in the designated section of the river, is visible in Husum, but not from a vehicle on the highway, even though the bridge crosses the river right at the falls.

The views beyond the valley floor are mostly of forested hillsides, with some visual indications that forest management practices have taken place. In places, there is a subtle mosaic created by the presence of oak stands in the more predominant stands of conifer.

TRENDS

The timber harvest that is taking place now in the White Salmon valley is almost entirely in those second-growth stands that have grown back since the early 1900s. There was a flurry of timber harvest activity in the couple of years prior to 1990. Whether that was a result of those stands just becoming ready to harvest, the high prices being paid for logs, or was a reaction to anticipated restrictions on timber harvest which might result from wild and scenic river management, is not known. Regeneration methods include clear cut, shelterwood, and selective harvests.

Although these harvest activities have had a significant effect on the view from above, there has been relatively little effect on the views from Highway 141 and the river. The fact that there was a county moratorium on timber harvest

within 200 feet of the river for a year and a half was probably a strong factor in protecting those views. Although, at the time of the Draft EIS there were a number of applications for harvest within the 200-foot zone, none of them have been cut, even though the moratorium was lifted in the summer of 1990.

Older aerial photographs of the valley reveal that there has been a continuing process of converting forested land to agricultural uses. In the past few years, several parcels have been cleared and planted, or will be planted, to orchard. At present, there is also at least one application for clearing land for conversion to alfalfa.

There has been little new residential development in the White Salmon River corridor in recent years. However, the latest new home, still under construction, is being built 35 feet from the banks of the river and creates a substantial effect on the view from the river. The regulations contained in the revised County Shoreline Master Plan will reduce the visual effects of residential development considerably, but will not eliminate them.

The demand for new home construction in the White Salmon Valley is unknown. There has

been substantial new development in the communities of Hood River and White Salmon. There are reports of substantial offers for the purchase of property in the White Salmon valley. Many people have expressed concern that the pressure for new homes will increase, but so far, very little property has changed hands. If the pressure for residential development materializes, there could be a boom in the construction of new houses.

In recent times, there has been a slow but steady conversion of second-growth forest land to agricultural uses, including orchards, and, to a lesser extent, to residential uses. It is expected that, barring intervention through governmental regulations, this process will continue, and in the case of residential uses, increase. This would change the relationships and the ratios of the different components of the scenery from the way they now exist. In the case of the addition of new residential structures it would probably also change the nature of the scenery, especially as seen from the river. Views from the river would take on a much more developed appearance, with a greater number of buildings, agricultural fields, orchards, and managed timber stands.

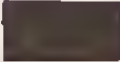


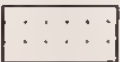





Residents take pride in their rural lifestyle, and many gain their livelihood from resource-based occupations



LAND OWNERSHIP

LOWER WHITE SALMON RIVER CORRIDOR

-  FEDERALLY OWNED LANDS
-  CORPORATE TIMBER LANDS
-  RURAL CENTERS INSIDE BOUNDARY
-  OTHER PRIVATE LANDS OUTSIDE RURAL CENTERS

-  WHITE SALMON RIVER AND RATTLESNAKE CREEK
-  RURAL CENTER LIMITS
-  EXISTING BOUNDARY OF WILD AND SCENIC RIVER AREA



SCALE: 1" = 2,000 Feet

LAND OWNERSHIP AND USES

OWNERSHIP

At the time of designation (1986), the White Salmon National Scenic River corridor was 100 percent privately owned. Since then, the Forest Service has purchased 38 acres on the east side of the river between Husum and BZ Corner and seven acres along the river in the community of Husum.

There are approximately 120 individuals or companies who own property ranging from less than one acre to more than 700 acres within the current river boundary. The majority of landowners are in the communities of BZ Corner, Husum and at Northwestern Lake. Most of these properties are less than one acre; some are from one to five acres. Parcels outside the three areas of concentration range from one acre to 180 acres in size.

SDS Lumber Company of Bingen, Washington owns the largest amount of land in the current boundary. The company owns five large parcels accounting for nearly 40 percent of the property. Their land is nearly all forested and managed for timber production. See the Land Ownership map on the facing page for the location of corporate timberlands, over 95% of which belong to SDS Lumber Company.

LAND USES

The categories of land uses in the designated river corridor include forestry, agriculture, residential, and other commercial uses. See the Land Uses map on the next page for land use locations.

FORESTRY

Most of the land within the lower White Salmon River corridor (59 percent), outside of BZ Corner

and Husum, is forested and is managed for timber production. The majority of this land has been harvested in the past with activities occurring as recently as 1989. A large portion was logged prior to construction of Condit Dam in 1913 and has regenerated to nearly pure stands of Douglas-fir. Both selective harvests and clearcuts have been utilized within the boundary.

The State of Washington, through its Shoreline Management Act, restricts timber harvest on "shorelines of statewide significance." This is the land within 200 feet of the ordinary high water mark (OHWM) of important waterways, which includes the White Salmon River. In this area, a maximum of 30 percent of the merchantable trees may be harvested in any ten year period. In addition, as described above, Klickitat County prohibited timber harvest for a period of a year and a half beginning in January of 1989. As a result, the river corridor is nearly all forested within this 400-foot zone. Exceptions are a few short stretches along the river between BZ Corner and immediately below Husum, where orchard or agricultural fields lie within the shoreline zone.

The land is well suited for forest management activities. With the exception of the steep gorge in the upper two miles of the river, the topography is gentle and can be logged by tractor or rubber tire skidders. The land produces high quality commercial timber at moderate growth rates when compared with other forest lands in western Washington. The principle commercial species are Douglas-fir and ponderosa pine. Other tree species include grand fir, Oregon white oak, alder, cedar and maple. Some attempts have been made by timber companies to convert oak stands to pine or fir since oak, with the exception of firewood, presently is not considered a commercial species.

Log Scaling



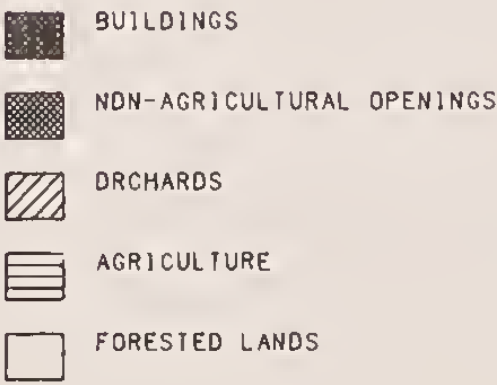
SDS Lumber Company estimates that most of its land is class III or IV (productivity classes that range from I to VI, with I being the highest). The company plans to harvest its trees at about age 70 and replants all areas that have been clearcut (Chamberlain, 1990). Douglas-fir is the principle species planted, but harsher sites are reforested with a mixture of ponderosa pine and Douglas-fir. The company manages its lands intensively, utilizing commercial thinnings at age 30-35, but does not do pre-commercial thinnings.

RESIDENTIAL USES

There are approximately 105 residential structures within the present boundaries of the designated river; 77 of these are in the Northwestern Lake area, Husum and BZ Corner. The 15 residences in the Northwestern Lake area are located on property owned by Pacific Power Company. The land is leased to the homeowners, but the buildings are owned by the residents. Some of the owners are year-round residents and others occupy the structures only in the summer. The residential structures are all located within 200 feet of the river and twelve are within 50 feet.

LAND USES

LOWER WHITE SALMON RIVER CORRIDOR



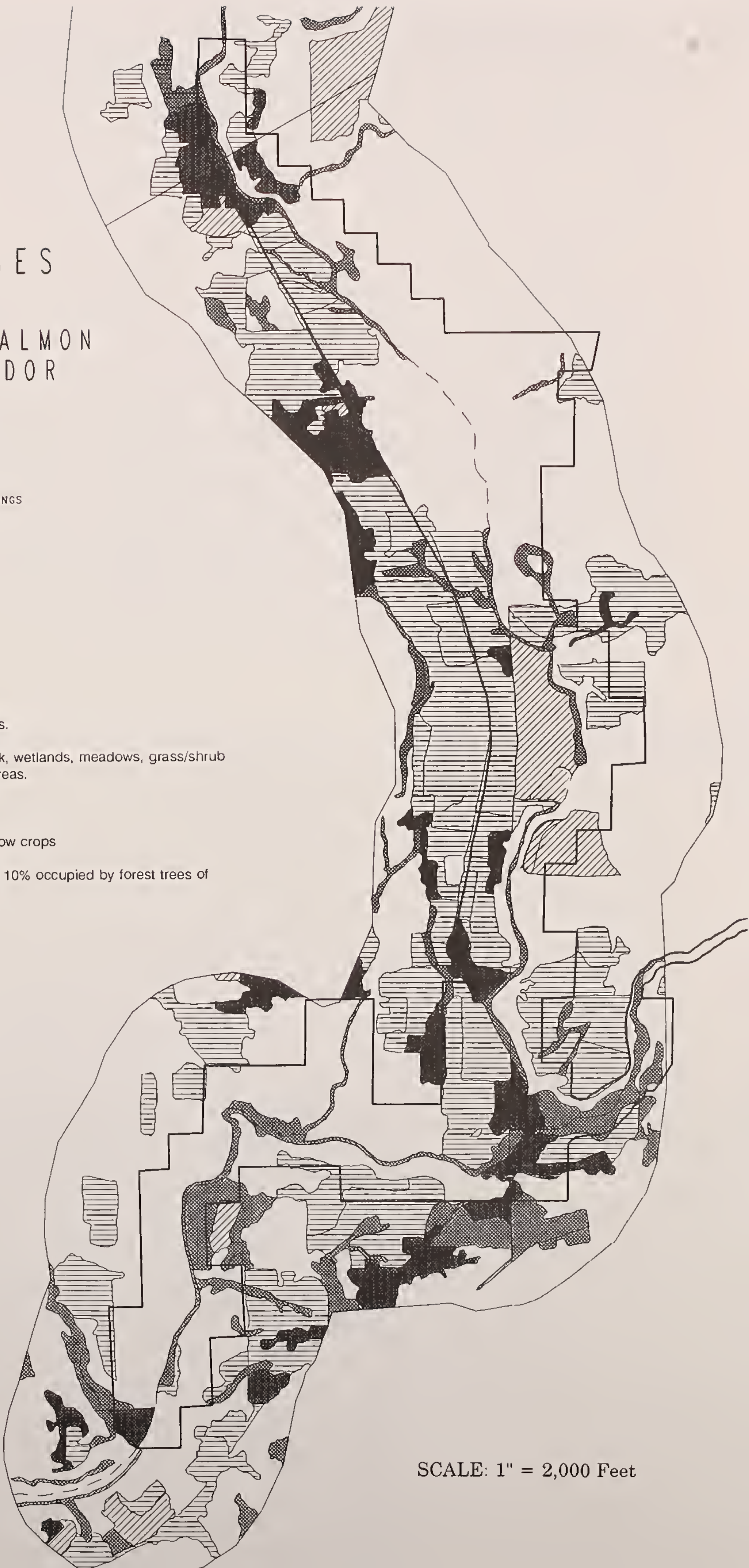
BUILDINGS: Concentrations of buildings.

NON-AGRICULTURAL OPENINGS: Rock, wetlands, meadows, grass/shrub complexes, shrubs, or riparian areas.

ORCHARDS: Commercial orchards.

AGRICULTURE: Pasture, hayfields, or row crops

FORESTED LAND: Land that is at least 10% occupied by forest trees of any size.



SCALE: 1" = 2,000 Feet

The community of Husum is unincorporated and has about 25 residential dwellings. The community of BZ Corner is also unincorporated and has 34 residential dwellings including seven on the east side of the river. There is a small trailer court with seven trailers in the south part of town. The remaining residences (28) are scattered throughout the area within the existing river boundary, with most of these on the east side of Highway 141 between Husum and BZ Corner.

Most people living in the river corridor are year-round residents who find employment outside of the area (Locke, 1990). There has been only a minor amount of new home construction in the corridor during recent times.

The number of residential structures by river segment is:

Northwestern Lake Area (RM 4.9 - 5.2)	15
Northwestern Lake - Husum (RM 5.2 - 7.2)	7
Husum Area (RM 7.2 - 7.8)	28
Husum - BZ Corner (RM 7.8 - 11.5)	21
BZ Corner Area (RM 11.2-12.5)	34
TOTAL	105

AGRICULTURE

A variety of agricultural practices occurs within the current river boundary, including alfalfa and grain production, fruit orchards, and limited cattle raising. There are approximately 410 acres in field crops and 90 acres in orchards. Most of the farm land is located west of the river between Husum and BZ Corner. The properties range in size from five to forty acres.

In most cases, farming activities are not the principle means of earning a living for the owners (Locke, 1990). Current land prices in the valley indicate that it would not be economically viable to purchase property with the intent of making a profit by farming. Nonetheless, the land does produce quality products and farmers could

compete and earn a profit if the price of the land were not a factor.

Orchards

There are two tracts of land currently being used for growing fruit; one east and one west of the river between Husum and BZ Corner. These properties are owned by Mt. Adams Orchards, considered to be the largest pear producers in the world. They grow a variety of fruits including several kinds of apples and pears. In recent years some acreage has been converted from forest land for the purpose of expanding the orchards.

Orchard use is the most intensive agricultural activity occurring in the valley. Management activities include pruning, thinning of fruits, the use of chemicals to control pests, irrigation, and the harvest of mature fruit. Irrigation water is from the White Salmon River, and hand set sprinklers are utilized. Frost control activities are accomplished with fuel oil heaters.

Field crops

The principle crop in the corridor is alfalfa, but some acreage is planted in wheat, as well. Oats are used as a rotation crop, but are harvested for hay rather than for grain. During the past few years, only about 40 acres of wheat have been planted per year in the designated river corridor. There are no grain storage facilities in the valley; the nearest is in The Dalles, OR, which is about 25 miles to the east.

Production rates for alfalfa average about five tons per acre in the Husum area. These rates fall off to the north because of changing soil conditions, and are about three tons per acre in the BZ Corner area (Locke, 1990).

The field crops between BZ Corner and Husum are raised without the aid of irrigation. The situation is different from Husum to Northwestern Lake, where a gravity flow system originating from Buck Creek supplies irrigation water.

Cattle

Currently there are only three landowners in the river corridor who raise cattle. These are relatively small operations when compared to early day operations which saw a great deal of cattle raising along the river. Historically, large numbers of cattle were wintered in the valley.

About half of the river corridor is considered "open range," where cattle have the right-of-way.

The other half is under the "herd law," which requires the cattle owners to fence their animals. The area east of the river between Husum and Gilmer Creek and west of the river between Husum and Northwestern Lake is "open range." Grazing occurs in the Spring Creek area, near Husum and about a mile north, on the east side of the river. Only occasional grazing occurs elsewhere.

About half of the river corridor is considered "open range," where cattle have the right-of-way



Some attempts to limit the use of chemical spraying have been done through the use of integrated pest management practices.

COMMERCIAL USES

Commercial uses within the existing river boundaries other than forestry and agriculture are small in number. The community of BZ Corner has a small store and a restaurant in addition to the commercial boat launch facility. The launch facilities are described in the recreation section. The store is actually located west of Highway 141 and is outside any of the river boundaries considered in this analysis. In addition, there is one commercial whitewater raft operation headquartered in the community.

Husum has a small store/gas station which rents rafts for river floating in the summer and provides

guide and photography services. There is also a commercial food processing business operated in the old school house in Husum. The only overnight accommodation within the corridor is a bed and breakfast facility located between BZ Corner and Husum, east of the river.

OTHER USES

The State Department of Natural Resources owns and operates a station in the community of Husum. Its principle purpose is to support forest fire suppression activities. In addition, there are two maintenance/storage areas for logging equipment in the river corridor. One is located in Husum and the second on Highway 141, north of Husum. There is a private landing strip located on the east side of the river, just north of Husum, and a weigh station operated by the state in Husum.

The community of BZ Corner has a small store and gas station, a restaurant, and a commercial boat launch facility



The United States Department of Defense has an established Military Training Route (MTR), used to train Air Force crews, that is located within the lower White Salmon River valley. Like other MTRs, this route (IR 344) was selected in part to avoid populated areas and air hazards. Use of the MTR is governed by procedures

developed jointly by the Department of Defense and the Federal Aviation Administration. The minimum flying altitude for the MTR is 500 feet above the ground. Over the past year, the number of flights have averaged about 68 per month.

SOCIOECONOMICS

This section describes the population, economic, and employment patterns in Klickitat County and the lower White Salmon River valley.

POPULATION

Klickitat County can be characterized as a rural "living landscape." Residents take pride in their rural lifestyle, and many of them gain their livelihood from resource-based occupations such as farming, ranching, logging, and providing recreation services such as river guiding.

According to 1988 figures, 61 percent of the county's 16,600 residents live in unincorporated areas. Between 1970 and 1980, the county's population grew approximately 3 percent annually. This growth rate dropped to 0.6 percent between 1980 and 1988; also during this time, approximately 200 people left the area. In comparison, the population of the state of Washington has increased 1.3 percent annually between 1980 and 1988 (Washington Office of Financial Management, 1989).

Klickitat County has three incorporated cities: Goldendale, Bingen, and White Salmon. Goldendale is the county seat and is the largest city in the county, with an estimated 1988 population of 3,730. Bingen's population has remained stable at between 665 and 679 people for the past 18 years. White Salmon, however, has shown a 1.7 percent annual growth rate for the period between 1970 and 1988 (Washington Office of Financial Management 1982, 1989).

There are two unincorporated communities in the White Salmon River valley. Specific population data is unavailable; however, there are 25 residences in the community of Husum. The community of BZ Corner has 34 residential buildings and a small trailer court.

Demographic data for 1980 show that Klickitat County had a slightly older population and larger households than the state of Washington as a whole (U.S. Bureau of the Census, 1982). The

median age of residents was 30.3 years, and the average household contained 2.73 people. In contrast, the median age of Washington state residents was 29.8 years, and the average household size was 2.61 people. According to the same data, Klickitat County had a significantly larger proportion of American Indians than did Washington state as a whole (2.95 percent versus 1.54 percent).

The 1990 population for Klickitat County was approximately 16,800. Forecasts suggest that the county will have a population of 16,935 for 1995, and 17,084 for the year 2000 (Washington Office of Financial Management, 1989). This represents a 1.2 percent increase for 1988-1990, a 0.92 increase for 1990-1995, and a 0.88 increase for 1995-2000, thus the county is expected to experience limited growth through the end of the century.

These figures may be appropriate for the county as a whole, but may not accurately reflect future trends in the White Salmon River valley. The valley lies within ten miles of Hood River, Oregon, an area that has experienced rapid growth and expansion in the past five years. This trend may become more evident in the White Salmon River valley in the form of increased demand for year-round and seasonal housing, particularly as housing becomes more expensive and less available in other nearby areas. Studies of forest lands in the Northeast cite rising demand for lakeshore and riverfront properties, followed by scenic ridges and land with access to major highways, especially those within commuting distance to metropolitan areas (Harper et al., 1990). The White Salmon River area has conditions similar to those described in the Northern Forest Lands Study, and may face similar trends in the future.

ECONOMICS

EMPLOYMENT

Klickitat County has historically had one of the highest unemployment rates in the state of Washington. However, the annual unemployment

rate for the county has decreased from an average of 17 percent in 1980 to 13 percent in 1988, following state and national trends for the same period.

Three industrial sectors employ a significant proportion of the county's labor force. The next table shows the proportions of the labor force employed in the three major industrial sectors:

Government	29.9%
Manufacturing	28.5%
Agriculture, Forestry, and Fishing	7.4%
All Other	35.2%

Of those employed in manufacturing, 650 are employed by Columbia Aluminum; the remaining 529 are employed by Champion International and the SDS Lumber Company (1989 Economic and Demographic Almanac of Washington Counties and Cities). Columbia Aluminum is located southeast of Goldendale, Champion International is in the town of Klickitat, and SDS Lumber Company is in Bingen.

In the White Salmon River valley, the economy has been based on resource extraction and commodity sales. While this will continue to remain important in the future, some transition

is occurring where recreation and tourism are becoming more important.

INCOME AND EXPENDITURES

Income levels for residents of Klickitat County have been consistently lower than those for Washington state residents. Figure III-12, shows the comparison of median incomes for Klickitat County and Washington State.

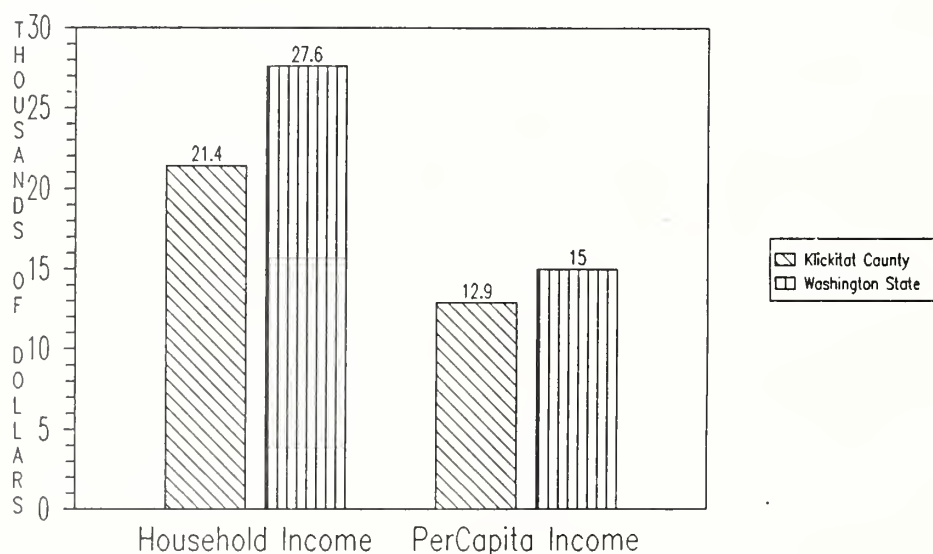
These figures represent a 22 percent lower median household and 14 percent lower per capita income for the county. Income for residents of White Salmon, Washington are lower still: the 1985 per capita estimate was \$10,707.

Klickitat County had a total of \$24.1 million in general county expenditures in 1981-82. The major categories of expenditures in 1981-82 are shown in the table below:

Education	10.9 ¹	45.1%
Health and Hospitals	3.2 ¹	13.3%
Highways	2.8 ¹	11.8%
Police Protection	0.9 ¹	3.8%
Other	6.3 ¹	26.0%
Total	24.1 ¹	100.0%

¹Millions of Dollars

Figure III-12: 1987 Median Incomes of Klickitat County and Washington State



The county had an outstanding debt of \$16.5 million, or \$1,004 per capita in 1981-82 (U.S. Bureau of the Census 1988).

The county bookkeeping system did not provide a convenient means for obtaining current fiscal revenue and expenditure information. In general, the county was characterized as having to carefully budget and evaluate its resources each year because of the limited economic base and revenues collected (Shipp, 1989).

PROPERTY VALUES

The portion of the lower White Salmon River included within the existing boundary totals 1,881 acres along 7.7 miles of river. From a valuation perspective, the real estate is extremely varied. Land values range from an estimated \$200 per acre for poor site timber properties to an excess of \$10,000 per acre for small riverfront homesite acreage and producing orchards. Commercial timber comprises a large portion of the land value on the river (timber is discussed later in this chapter). The condemnation value of orchard land has been estimated to be between \$10,000 and \$20,000 per acre (Bloxom, Jr., 1991).

Various figures related to property values are shown in the next table:

Median house value in County, 1991 ¹	\$45,000
Median house value in Boundary ¹	\$30,000
Median house value in State	\$60,700
Average value of farms, 1982	\$587,100
Average value of land ²	\$482
Property tax levy rates ³	\$12.564 ³

¹(Klickitat County Assessor's Office 1991)

²per acre (U.S. Bureau of the Census 1988).

³per \$1,000 of assessed property value

There is a definite trend toward increased use of land in the valley for residential development. Land prices have escalated and there is growing pressure for subdivision of land throughout the Columbia Gorge. Gross sales volume in the Hood River/White Salmon vicinity has increased from \$15 million in 1986 to \$45 million in 1989. View properties on both sides of the Columbia River

have at least doubled in value in the last two and a half years (Darby, 1990).

As would be expected in this speculative atmosphere, property taxes are increasing. Estimates from the Klickitat County Assessor indicate that 1989 assessed valuations increased an average of 30% on improvements and 75% on land as compared to 1985. Property taxes combined with heightened housing demand and other factors could provide incentive for landowners to subdivide and sell their property.

The increase in market activity is partly attributed to the popularity of the Columbia Gorge as a windsurfing destination of international acclaim and the creation of the Columbia River Gorge National Scenic Area. Studies of the Upper Delaware River valley suggest that the designation of that river into the Wild and Scenic Rivers System had a positive effect on market activity: sales increased over 200 percent for tracts of 0.3-0.8 acres in the six years following designation, with moderate gains in land prices (Coughlin & Keene, 1985). Similar trends in land values were observed with the designation of the Cape Cod National Seashore. Although designation negatively affected private building construction, the positive effect on values of remaining lands more than offset the lack of new construction (Nez, 1984).

Pressure from recreational and retirement interests is not being experienced along the White Salmon River at this scale. However, due to its scenic beauty and proximity to Hood River, there has been a very definite surge in demand and consequently in property values. Other factors, such as the proximity to an interstate highway and the presence of a major metropolitan area within commuting distance, are also likely to result in increased pressure for residential development, as has been the case in forested lands in the Northeast (Harper et al., 1990).

AGRICULTURE AND GRAZING

Much of the land in the lower White Salmon valley is planted in hay, but fruits, vegetables, and Christmas trees are also grown. Mt. Adams Orchards Company, a subsidiary of Washington

Fruit and Produce, began operating in 1906, and employs between 30 and 200 people, depending on the time of the year (Ing, 1990). Orchard labor and local fruit packers each typically earn \$1,000 per acre per year (Bloxom, Jr., 1991). Adding employee benefits, Mt. Adams Orchards contributes approximately \$2,600 per acre per year in labor income to both the local and regional economies. The total economic impact of the orchard on the area and region will be significantly greater because of the multiplier effect. Mt. Adams Orchard purchases about \$200 in supplies per acre per year (Bloxom, Jr., 1991). This generates about \$15 per acre per year in state sales tax revenue. Overall, an average of \$3,829 per acre is generated in labor income from orchards in the nearby Hood River valley (Oregon State University Extension Service, 1989).

TIMBER

Timber production has been one of the contributors to the economy of the White Salmon River valley since the turn of the century. Douglas-fir is the primary species harvested, followed by mixed pine and fir stands. Oregon white oak is considered a non-productive species for timber harvest. SDS Lumber Company owns a large portion of land in the valley. They generally operate on a 70 to 80-year rotation harvest, replanting all clearcuts within a year. The company employs an average of 375 people, and reports an annual payroll of approximately nine million dollars. Of the 7.4% of the county's population employed in agriculture, forestry, and fishing, most are involved in forestry. In addition, nearly half of the 28.5% of county residents (or approximately 14%) employed in manufacturing are employed by SDS and Champion Timber companies. Therefore, directly or indirectly, approximately 22% of the county's population is employed in timber-related work.

RECREATION/TOURISM

During the 1991 use season, there were 15 commercial river guides under permit to operate on the lower White Salmon River. Of those, three are locally based. Others travel from Seattle, Olympia, Portland, and elsewhere. Although outfitters based elsewhere may use the river at different times, they rely on its sustained flow levels both early and late in the season when many other rivers in the area are too low to use. There is one business in Husum that caters specifically to whitewater recreationists, offering rental equipment, supplies, and on-river photographs, as well as guide services. In addition, the primary access point in BZ Corner is a privately owned cable launch that charges boaters for access to the river.

Other providers of goods and services in the valley may be affected by future river management. There is a gas station/grocery store in BZ Corner, across the road from "The Logs" restaurant and tavern, and there is also a bed and breakfast, "Orchard Hill Inn," whose property lies on the east side of the river between Husum and BZ. Other bed and breakfast inns exist within the valley, although they are located considerably north of the designated section of the river.

CONCLUSION

Residents of the White Salmon River valley have emphasized the importance of their rural lifestyles and social values. Forestry and agriculture make significant contributions to the regional economy, as does recreation. Residents want to preserve the basis for their livelihoods. While they would like to see some improvements in the local economy by encouraging development of new businesses and recreational opportunities, they would also like to limit development so the rural character of the valley does not change significantly.

LAND USE CONTROLS

INTRODUCTION

There are almost two dozen federal, state, and county regulatory authorities which influence the way the land and water along the White Salmon River can be used. Following is a list of those authorities:

FEDERAL

National Wild and Scenic Rivers Act
Clean Water Act of 1972
Safe Drinking Water Act of 1974
Endangered Species Act of 1973
Fish and Wildlife Coordination Act
Yakima Treaty of 1855
Cultural Site Protection Law - 1989
National Environmental Policy Act
Federal Insecticide, Fungicide, and Rodenticide Act

WASHINGTON STATE

Washington State Hydraulic Code
Forest Practices Act
Water Quality and Allocation Laws
Shoreline Management Act of 1971
State Environmental Policy Act
State Pesticide Laws, as Amended

Klickitat County

Zoning Ordinance
Shoreline Master Plan
SW Washington Health District Septic System Setbacks
Current Use Assessment
County Comprehensive Plan
Floodplain Management Ordinance
Klickitat County Solid Waste Management Plan

Two of these have more immediate effects on what landowners can do on their land than others. These are the Klickitat County Zoning Ordinance and the Klickitat County Shoreline Master Plan. The most important regulations of these ordinances are described below. A more inclusive summary of each ordinance is included in Section IV of Appendix E, the Management Plan.

ZONING ORDINANCE

GENERAL BACKGROUND

The Klickitat County Zoning Ordinance was adopted in April, 1979, in order to implement the County Comprehensive Plan and to "provide uniform, equitable, and reasonable standards to govern the usage of land and structures in the interest of the public health, safety and the general welfare." The Klickitat County Comprehensive Plan is currently being updated.

Almost all of the land within the potential boundaries of the White Salmon National Scenic River is presently zoned either Rural Center or Resource Lands in the Klickitat County Zoning Ordinance. In addition, a small area adjacent to BZ Corner (less than 60 acres in the largest potential boundary) is zoned Rural Residential, and the 20 acres or so in Skamania County have not been zoned.

RURAL CENTER ZONE

The Rural Center zone at BZ Corner covers a little over 100 acres, 78 acres of which would fall within the largest boundary being considered. At Husum, the total land area covered by this zone is about 385 acres, with about 120 acres within the largest potential boundary.

The purpose of the Rural Center zone is to provide for the location of small businesses and commercial services in rural areas for the convenience of county residents.

Permitted uses include those which would normally be expected in a small rural community such as: agriculturally-oriented commercial or industrial uses, farm equipment sales, business or professional offices, other small retail or commercial service establishments, and single family dwellings, including mobile homes and duplexes. In addition, planned unit developments, mobile home parks, and multiple dwelling structures of three to six units are included as

conditional uses (a conditional use is an activity specified by the zoning ordinance which will be permitted if it meets reasonable conditions which would make it compatible with the other uses which are permitted outright).

Minimum density for residential developments is a lot size of 5,000 square feet for areas served by a public or community water and sewer system. For areas not so served, the minimum lot size is whatever is necessary for the protection of public health, primarily septic system requirements. Minimum lot width is 50 feet, and minimum setback from the front lot line is 15 feet.

RESOURCE LANDS DISTRICT

The resource lands district covers all the land in Klickitat County within the potential boundaries except for the small amounts which are rural center or rural residential. About 90% of the area within the largest boundary falls within this zone.

This district is intended to provide land for present and future commercial farm and forest operations in areas of productive soils and other conditions suitable for the continued success of such operations. It is also intended to minimize conflict between farm and forest practices and various non-farm uses (particularly residential), by allowing development of such land in accordance with performance criteria.

The principle uses which are permitted outright include farm and forest use, plus other uses and activities which are closely related to those two main uses. They also include single-family dwellings, mobile homes, and seasonal homes, as well as some extensive recreation uses such as fishing lakes and hunting preserves. Other uses which are permitted on a conditional basis include multi-family residential dwellings and condominiums, schools, churches, utility facilities, cemeteries, mines, etc., plus recreation facilities such as parks, golf courses, riding stables, and camping clubs.

Allowable density is determined at the time of proposed development through a process which compares suitability for resource production

(agriculture and forestry) with suitability for development (primarily dwellings). Depending on the overlay of these two suitabilities, an average density is assigned for the total parcel along with a requirement for leaving some percentage of the parcel as open area. Open area requirements range from 97.5% open area to 75% open area. Average densities range from one dwelling unit per 20 acres to one dwelling unit per 1.3 acres. The open area may be divided again after five years.

RURAL RESIDENTIAL ZONE

There is a small area of land adjacent to the BZ Corner Rural Center on the northeast side, which is zoned Rural Residential. Uses permitted are fairly similar to those allowed in the Resource Lands District with the exception of forestry, and the commercial and industrial type activities related to farming are permitted only as conditional uses. One of the major differences is that the density requirements allow a minimum lot size of 2 acres.

EXCEPTIONS TO ZONING REGULATIONS

The county has procedures for making exceptions to zoning regulations in the form of variances, and for changing them through re-zoning.

A variance to the zoning ordinance may be granted for hardship caused by the physical qualities of a piece of property. The variance must not constitute the granting of special privilege, and must not be "detrimental to the public welfare or injurious to the property or improvements in the vicinity."

Re-zoning is a change to the law which must be acted upon by the Board of County Commissioners. Issues considered by the Board include conformity of the re-zoning proposal to the comprehensive plan, conformity of the intended use for the re-zoned land to surrounding uses, whether the change would benefit an individual to the detriment of the community, evidence of changed circumstances since the area was zoned, effects on the community, and the comments of adjacent landowners.

The ultimate ability to change the existing zoning ordinance is through the passage of a new ordinance based on a revision of the county comprehensive plan. Klickitat County is in the process of revising their comprehensive plan and intends to begin the revision of the White Salmon River area in late 1991.

SHORELINE MASTER PLAN

GENERAL BACKGROUND

The set of regulations with the greatest control over the activities that take place in the immediate shorelines of the river is the Klickitat County Shoreline Master Plan. This plan was created in response to the Washington State Shoreline Management Act of 1971, and has recently undergone a major revision. After an extensive period of discussion and revision by the Klickitat County Planning Department and review by the Washington State Department of Ecology, the final revisions were adopted by the Board of County Commissioners in April, 1990.

The Shoreline Master Plan applies to land within 200 feet of the ordinary high water mark of the White Salmon River and the major streams which flow into it. It is an overlay of the County Zoning Ordinance and regulates the development of commercial uses, residences, boating facilities, recreation facilities, etc., and practices involved in agriculture, forest management, etc.

ENVIRONMENT DESIGNATIONS

The Shoreline Master Plan divides the shorelines of the designated portion of the White Salmon River into three different categories, or "Environments": Community, Rural, and Conservancy. These "Environments" specify the type and level of regulations which apply to the various types of development and uses. See Figure III-13,

below, for a summary of use limitations in each "Environment" in the proposed plan.

In addition, the first 50 feet on each side of the river, in all "Environments," is designated a natural buffer zone. The purpose of this zone is to establish an undisturbed buffer of natural vegetation in order to preserve the shoreline's natural riparian zone, to assure water quality, and to preserve the aesthetic qualities along the shorelines. With the exception of a one-time, 30% harvest within the next 10 years, the natural buffer zone allows only minor vegetative modification that does not substantially alter the visual character or adversely affect riparian structure and function. Development of structures is excluded from this zone for purposes other than flood control, erosion control, water-dependent uses, or access to banks.

COMMUNITY ENVIRONMENT

The purpose of the Community Environment is to encourage residential, recreational, and commercial uses to locate here, at moderate intensities, rather than in the other areas. This Environment covers those areas with concentrations of development, which are presently unincorporated but which are planned to accommodate community expansion.

The shorelines in the vicinity of the communities of BZ Corner and Husum are designated Community. This is approximately 17% of the total shoreline area.

Residential development is allowed, subject to the following standards: 50-foot setback from the river, 104-foot river frontage, and ½ acre minimum lot size. Commercial development is also allowed, but it needs a 100-foot river setback, and, since there is no specific frontage requirement for commercial structures, the underlying community center zone standard of a 50-foot lot width applies.

Figure III-13: Summary of All Use Limitations in Shoreline Environments

USE ACTIVITY	ENVIRONMENT DESIGNATION			
	Natural Buffer	Conservancy	Rural	Community
Agriculture	*	*	***	***
Aquaculture	*	*	***	***
Forest Practices	O	*	*	*
Commercial Development	O	O	*	*
Marinas	O	O	O	*
Mining	O	*	*	*
Signs	*	*	***	***
Residential Development	O	*	*	*
Utilities	O	*	***	***
Bulkheads	*	*	*	***
Landfilling	O	*	*	*
Solid Waste Disposal	O	O	O	O
Dredging	O	*	*	*
Shoreline Alteration	*	*	*	*
Roads	O	***	***	***
Railroads	O	O	***	***
Piers	*	*	*	*
Arch/Hist Site Modification	*	*	*	*
Recreation	*	*	***	***

*** Permitted

* Permitted, but with conditions

O Prohibited

RURAL ENVIRONMENT

The purpose of the Rural Environment is to protect agricultural lands from urban expansion by assuring that they are maintained in existing agricultural use or open space. Moderate intensity recreation use (if it is compatible with agricultural activities) and low density rural residential use are considered appropriate. This Environment is

intended to cover those areas having high capability to support the commercial production of agricultural crops.

The only area along the designated portion of the White Salmon River which is designated Rural, is a segment along the east side of the river, which extends north from the bridge in

BZ Corner about 1,700 feet. This is about 2% of the total shoreline of the designated section.

Residences require a 100-foot setback from the river and a frontage of 416 feet on the river. Commercial structures are allowed by a conditional use permit. They also have a 100-foot river setback, and, as with the Community Environment, fall back to the underlying rural center zone standard of a 50-foot lot width.

CONSERVANCY ENVIRONMENT

The purpose of the Conservancy Environment is to protect, conserve and manage existing natural resources and/or unique, valuable, esthetic, historic and cultural areas in order to achieve sustained resource utilization and provide recreational opportunities. Examples of uses that are appropriate under this classification include dispersed outdoor recreation activities, timber harvesting on a sustained yield basis, passive agricultural uses such as approved grazing, and/or non-intensive cultivation practices.

All the shoreline between BZ Corner and Husum, and from Husum to the downstream river boundary at Buck Creek, are included in the Conservancy Environment. This is about 81% of the shoreline adjacent to the designated portion of the White Salmon River. In addition, the shorelines of portions of Gilmer, Rattlesnake, and Buck Creeks are included in the Conservancy Environment.

Residential development is permitted with a 100-foot setback from the river and 660 feet of

river frontage. Commercial development is prohibited under this classification along the White Salmon River.

ENFORCEMENT OF SHORELINE MANAGEMENT PLAN REGULATIONS

Although a letter in response to the Draft EIS stated that 13 violations of the Shoreline Master Plan have recently occurred, County records show seven substantive violations of Shoreline Plan regulations since 1988. Some of these have been vigorously pursued by the County and corrected, and others have not. Available staff time and funding are factors in the level of enforcement attempted. Another factor is the perceived magnitude of the violation, i.e., if the infraction is minor, it may not seem worthwhile to spend the time and money and cause the ill will to correct it. Another factor is the current low fines for violations. If values of an activity are high, it may be worthwhile to figure in the cost of a fine as part of the cost of the project. The revised Shoreline Master Plan adopted a schedule of fines which is intended to reduce this problem.

ADDITIONAL REGULATORY AUTHORITIES

All of the other regulatory authorities, including the National Wild and Scenic Rivers Act (from which excerpts are included), are summarized briefly in Section IV of Appendix E, the Management Plan.

CHAPTER IV

**ENVIRONMENTAL
CONSEQUENCES**

CHAPTER IV

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

The following section describes the potential effects of the management alternatives on the resources described in Chapter III, Affected Environment. In Alternative 1, the anticipated effects to the resources are based on the assumption that existing laws and regulations will continue to control the changes which take place along the White Salmon River, without participation by the Forest Service. Alternatives 2 - 6 describe effects likely to occur should the management direction described in those alternatives be taken.

CHANGES BETWEEN THE DRAFT EIS AND FINAL EIS

The major change in Chapter IV is the addition of discussions of the effects of Alternative 6 on each of the various components of the affected environment. Also new is a discussion of the effects on Land Values and County Taxes. This

is included in the section on Effects on Socioeconomics.

There have been numerous, relatively minor, changes in the effects discussions. This is a result of commenters pointing out effects in support of an alternative they favored or opposition to an alternative they did not like. Many of these had not been mentioned in the Draft EIS, so the discussions were expanded to include them.

An important change was made in the discussion of socioeconomic effects. This has to do with the probable long-term effect on the socioeconomic situation in the White Salmon River valley if current trends continue with no intervention.

Other significant changes include:

- additions to some of the sections on mitigation to give an estimate of the probability of the mitigation measures being undertaken and being effective; and
- revisions of the mitigation discussion for the Plants and Animals section to make it more appropriate for a programmatic EIS.

EFFECTS ON WATER QUALITY AND QUANTITY

Water quality and quantity within the designated section of the White Salmon River may be affected by a variety of factors: residential and commercial development, agriculture, including orchards and grazing; forestry, recreational development and use, water withdrawal, construction of structures, and removal of debris from stream channels. Areas of public concern include contamination of surface water from septic systems and agricultural practices such as pesticide application, increased soil erosion from forestry and agricultural practices, and impacts from increasing whitewater recreation use.

Management of lands outside and upstream of the corridor boundaries potentially have overriding effects on water quality and flows within the designated river segment. Historically, water quality degradation and decreases in flows from upstream activities have been minimized due to the large in-flow of ground water within the canyon reach. As the size of the population in the entire watershed grows, potential increased stream-side development, increased water withdrawals for both drinking water and agricultural use, increased septic drainage and storm water run-off from developments may contribute to decreased water quality

and low flows. This section describes potential changes to water quality and quantity that may occur over both the short-term, within the next 10 years, and long-term, based on the different management alternatives being considered.

ALTERNATIVE 1

Overall, a decrease in the quality and quantity of water within the designated section of the White Salmon River would be expected. A possible four-fold increase in residential development within the 200-foot corridor on either side of the river (county and state Shoreline Management Zone) would increase nutrient, bacteria, and sediment input. Likely decreases in flows due to additional water withdrawals would also be expected.

The recently revised Klickitat County Shoreline Master Plan reduces potential impacts of future residential development on water quality by implementing additional setback and frontage requirements for buildings. The plan also prohibits new agricultural clearing within 50 feet of the river channel and requires grazing plans to minimize impacts to streambanks. In addition, the plan limits timber harvest within the Shoreline Management Zone.

Short-term increases in sediment production could result, primarily from the one-time harvest of trees within 50 feet of the high water channel, during the next ten-year period. After this short-term increase, sediment production from forest operations would be less than in the past, resulting in a slight improvement in water quality.

Overall agricultural impacts to water quality would be expected to be similar to present levels with effects of minor increases in clearing of lands for agricultural use being offset by tighter shorelines restrictions. Current state and federal laws already exist and should be adequate, if monitored and enforced, to regulate pesticide use and prohibit movement into surface and groundwater. New water diversion structures could be constructed to provide additional irrigation and could cause short-term increases in sediment production.

Substantial increase in recreational use of the river would probably include additional river access and development within riparian areas. This would increase soil compaction and damage to vegetation on steep stream-adjacent slopes, resulting in increased soil erosion and sediment transport. If adequate sanitation facilities were not provided, nutrient and bacterial input would also increase.

Additional water diversions and wells pumping shallow ground water within the watershed would reduce flows in the designated reach. Currently the State Department of Ecology has no plans to establish minimum flows nor validate water claims for the basin. Continued withdrawals would be allowed and flows could be significantly reduced during the low flow period (late summer through early fall). The Washington Department of Ecology would probably establish minimum flows at some future time when low flows become a critical issue. At that time it may not be possible to maintain flows needed to protect instream uses at current levels.

ALTERNATIVE 2

Since overall water quality is currently good, only minor improvements could be expected if this alternative is implemented. Minimal additional residential development is expected within the river boundary, with a corresponding minimal risk to water quality. Agricultural use (including orchards, pastures, crops and grazing) and timber harvesting eventually would be eliminated from the 400-foot buffer area on both sides of the river. This would result in protection of soils and vegetation on all stream-adjacent slopes that contribute direct run-off into this segment of the river. This would reduce current levels of sediment and nutrient input from these land management activities. In addition, a cooperative water quality monitoring program would detect and correct other possible sources of water quality degradation, such as bacterial and nutrient input from substandard septic systems.

Recreation impacts to water quality would be similar to current conditions, with no improvement in water quality expected. Retaining woody

debris within the stream channel could cause short-term increases in bank erosion by deflecting moderate to high flows into banks, thus producing additional sediment input. Long-term benefits of increased stream channel stability should decrease overall sediment input and transport.

This alternative could increase flows above existing levels. Realistically, only minor increases in flows would be expected through federal purchase of active water withdrawals during the critical low flow periods.

ALTERNATIVE 3

Water quality is expected to remain similar to current conditions. This alternative allows no additional residences or septic systems to be built within the 200-foot shorelines management zone, thus minimizing the potential contamination of the river.

Maintaining a 200-foot vegetated strip on each side of the river (except for existing agricultural clearings) would provide for short-term maintenance of water quality with a slight improvement over time. This vegetation would provide protection for almost all stream-adjacent slopes along the river outside the developed recreation sites. Maintenance of other riparian and wetland habitat would minimize risk of water quality degradation from activities outside the shorelines area.

Less than half of the new residences within the river corridor would be constructed outside the rural centers of Husum and BZ Corner with an average density of one residence for every 40 acres. This density level should be adequate to protect water quality if adequate septic system construction and maintenance standards are followed (Beak, 1985).

Water quality impacts from recreational use of the area would be fairly similar to current conditions. Increased soil compaction and damage to vegetation would result in increased soil erosion. However, providing additional facilities and setbacks would concentrate impacts to specific areas that can be monitored and would

mitigate potential for water quality degradation. The addition of adequate sanitation facilities would minimize nutrient and bacterial input from recreational sources.

To implement this alternative, Washington State and USDA Forest Service would need to develop a cooperative program that would prevent additional water withdrawals within and immediately upstream of the designated segment on the White Salmon River as well as the major (perennial) tributaries, including Gilmer, Rattlesnake, Spring, and Buck Creeks. Monitoring of stream flows, diversions, and additional ground water withdrawals would also be needed to maintain current levels. At this time, it is unlikely that the state would adopt such a program without an adequate minimum flow study being conducted to support the withdrawal of this basin from further water applications.

ALTERNATIVE 4

Water quality would be maintained over the short term, but would be at risk over the long term due to a potential two to three-fold increase in residential and commercial development within the 200-foot shorelines area. It also would be affected by the additional long-term development outside the boundaries.

Increased restrictions for grazing and forestry would tend to increase water quality by reducing the input of sediment, nutrients, and bacteria. Current regulations for other existing agricultural uses such as orchards and cropland would be maintained. Increased monitoring of these existing agricultural uses, sharing information with landowners, and implementing the existing state non-degradation goal should adequately reduce risk of water quality degradation from these current agricultural uses. Overall water quality impacts from recreational use of the area would be similar to existing conditions as well as Alternative 3.

A minimum flow would be established through a cooperative program with Washington Department of Ecology. Flow standards would need to be developed to adequately maintain whitewater

recreation and fisheries values and establish limits to further withdrawals. Under this program, standards for minimum flow levels could possibly allow for additional water withdrawals while still protecting recreation and fisheries values. Monitoring of flows and both surface and ground water withdrawals would insure maintenance of the established flows.

ALTERNATIVE 5

In this alternative there is increased potential for degradation of the current level of water quality within the White Salmon River, in both the short and long-term. This would result from increased recreation use within the river corridor. Impacts from residential and commercial development would be similar to alternative 4, with a two to three-fold increase in development within the shorelines zone.

The variable width buffer area ranging from 50-150 feet would be adequate to protect about 90% of the stream-adjacent slopes along the river. Most of the remaining areas would be within developed recreation sites. Water quality impacts from forestry and grazing are expected to be less than they currently are, but other agricultural uses would have effects similar to existing conditions and those of Alternative 3.

Effects on water quantity would be the same as in Alternative 4.

ALTERNATIVE 6

During the next ten years, water quality would be expected to remain similar to current conditions and fairly similar to both Alternatives 3 and 4. Within this alternative, no additional residences or septic systems would be built within the 200-foot shorelines management zone outside of the rural centers. However, there is the potential to double the development in this zone within the rural centers (another 30-40 structures) as long as this development is outside the river buffer and community water and sewage systems are developed. There appears to be little likelihood of developing these community systems within the next few years; so, the expected

short-term increase in development within the 200-foot shorelines zone in both Husum and BZ Corner is very limited. Such limited additional development within the shorelines should have minimal potential for contamination of the river.

Maintaining a 200-foot vegetated strip on each side of the river (except for existing agricultural clearings) would provide for short-term maintenance of water quality with a slight improvement over time. This vegetation would provide protection for almost all stream-adjacent slopes along the river outside the developed recreation sites. Maintenance of other riparian and wetland habitat would minimize risk of water quality degradation from activities outside the shorelines area.

Water quality impacts from recreational use of the area would be similar to Alternative 3. Increased soil compaction and damage to vegetation would result in increased soil erosion. However, providing adequate facilities and setbacks would concentrate impacts to specific areas that can be monitored and may mitigate potential for water quality degradation.

To implement this alternative, Washington State and USDA Forest Service would need to develop a cooperative program that would prevent additional water withdrawals within and immediately upstream of the designated segment on the White Salmon River as well as the major (perennial) tributaries, including Gilmer, Rattlesnake, Spring, and Buck Creeks. Monitoring of stream flows, diversions, and additional ground water withdrawals would also be needed to maintain current levels. At this time, it is unlikely that the state would adopt such a program without an adequate minimum flow study to support the withdrawal of this basin from further water applications.

CUMULATIVE EFFECTS

In all alternatives, if future development upstream and outside the river boundary reaches the maximum level allowed under current zoning requirements, and no community water, sewage, and storm drainage systems are constructed

within the rural centers of Husum, BZ Corner, and Trout Lake, there is a large risk of negatively impacting water quality through shallow ground water contamination and storm water run-off. There is the potential for a significant increase of nutrient and bacterial levels during low flow periods.

MITIGATION MEASURES

Reduction of lands zoned rural center and/or a specific density/time/acre requirement for development of community water, sewer, and storm water systems for Husum, BZ Corner, and Trout Lake rural centers would reduce long-term risk to water quality. However, the potential for all these measures being put into effect appears to be low for the near future. A technical assistance program, based on available Forest Service funding, would increase the potential for implementation.

To minimize risk of nutrient and bacterial contamination of the river and adjacent shallow ground water tables, additional standards for septic systems would be needed within the river valley, as well as the above restrictions for the rural centers. In all alternatives, mitigation

measures such as: decreasing the density of development, increasing soil depth required for septic system placement, minimum septic system setback of 200 feet from surface waters, as well as periodic inspection and maintenance of existing systems, would also minimize the potential for septic contamination and maintain water quality (Intergovernmental Resource Center, 1988). There is a moderate probability that some of these measures will be implemented in the near future through cooperative efforts involving Klickitat County, Southwest Washington Health District, Underwood Conservation District, and Washington State Department of Ecology. A technical assistance program along the Upper White Salmon could **improve** water quality when combined with changes in zoning and septic standards that Klickitat County is willing to consider. Designation of the Upper White Salmon River as a National Wild and Scenic River would likely facilitate these efforts.

Location of developed recreation facilities at least 200 feet from surface waters, riparian zones, and wetlands would adequately reduce risk of water quality degradation from increased recreational development and use within the designated section.

EFFECTS ON RESIDENT FISH

INTRODUCTION

The resident rainbow trout population in the designated portion of the White Salmon River will be affected by the amount and quality of habitat available and the amount and type of fishing that occurs. These factors are related to access for anglers, fishing regulations, and water quality and quantity. This section considers, by alternative, how the fish population would be affected by these parameters. It does not consider effects from activities occurring above the designated section of the river.

ALTERNATIVE 1

In this alternative, there is no further acquisition of lands by the Forest Service, and, therefore, no new public access to the river. As compared to Alternatives 2, 3 and 5, the negative effects on resident fish would be much less in the short run (the next five years). This is because the public would be largely prevented from crossing private land to reach fishing spots along the river. Some use would continue, as it currently does, by landowners and others with and without permission.

While public access to the shoreline is limited, whitewater boating would increase unchecked, and resident fish could suffer severe effects as more outfitter/guides discover and offer fishing trips by raft or drift boats. It is anticipated that this effect would take place between the years 1995 and 2000, based on current data for whitewater boating use. This impact could be mitigated if the state were to implement strong harvest regulations to reduce the taking and injury of fish. The Forest Service would not play a role in encouraging the state to adopt these regulations. The state has indicated that it will implement stronger harvest regulations on the designated river in 1992. This would help protect the fish population.

It is anticipated that because of further water withdrawals in this alternative, the quantity of

water in the river would be reduced during July through October. This would reduce available fish habitat and cause a reduction in the number of fish that could be supported.

ALTERNATIVE 2

Whitewater boating use would remain at the current level and would not adversely affect the resident fish population unless an increase in guided fishing trips occurs. Such commercial activities could be controlled through the Forest Service special use permit provisions for commercial outfitters.

Even though additional trail access would not be provided, the acquisition of 800 acres of land would increase public access to the river and have a significant impact on the trout population if anglers discover that new opportunities are available. Recommendation to the state to implement harvest regulations, including catch and release, no bait and barbless hooks, would mitigate the impact some, but it is expected that poaching may cause the population of large fish to decline somewhat. Without additional regulations, along with a strong public information and enforcement program, it is expected that the trophy-size fish population would be reduced significantly within a five-to-ten year period after acquisition.

Provision in this alternative to bring the river to a more natural condition would result in more woody debris accumulating in the river. This condition would develop in the long term, 15-20 years, and would increase fish habitat quality. Additionally, this woody debris would make fishing more difficult. The long term effect would tend to enhance the rainbow-trout population.

ALTERNATIVE 3

Increased opportunities for public access due to the acquisition of about 600 acres of land, the slight increase in whitewater recreation use, and the increased trail access could cause significant

effects on resident fish. Without implementation of strong harvest regulations, along with public information and enforcement, it is expected that the resident fish population would decrease dramatically within one to two years of land acquisition and trail construction. Decreases in the fish population would occur because of easier access for anglers. Some areas that remain inaccessible to anglers would maintain healthy fish populations, but generally, numbers would be severely affected (Weinheimer, 1990).

ALTERNATIVE 4

The effects on resident fish in this alternative would be comparable to those for Alternative 1 in the short term (the next five years) and would have the least negative impact in the long term. This is because only 200 acres of private land would be purchased, providing public access, and there would not be the extent of hiking trails as in Alternatives 3 and 5. Whitewater recreation use would increase moderately, but the amount of guided fishing trips could be controlled through special use permits. The resident fish population would experience only a slight negative effect in the short term (the next five years) and moderate effects in the long term. Harvest regulations, including catch and release, artificial-only bait, and barbless hooks, along with effective public information and enforcement, would adequately protect and maintain the present resident fish population.

ALTERNATIVE 5

This alternative has the greatest potential for negative effects to the resident fish population. Increased public access with the purchase of about 500 acres of land in fee title, the extended hiking trails on the northeast and southwest parts of the river, and the large increase in whitewater boating, would significantly increase use of the river. The increased access would make it relatively easy for anglers to reach the river. Because rainbow trout are fairly easy to catch, (Weinheimer 1990) it is anticipated that the existing fish population would be severely reduced in a short period (one-to-two years) after access is provided.

Strong harvest regulations implemented by the state, such as catch-and-release, no bait, and barbless hooks, and public information and enforcement would help protect the fish population. However, there would still be some decrease in numbers and size in the long term (the next five years). As part of this alternative, the Forest Service would recommend a prohibition on fishing in the designated portion of the river. If the state adopts this ban, the fish population would be adequately protected.

ALTERNATIVE 6

In this alternative there would be a slight decrease in resident fish populations both in the short and long term. The increased number of publicly owned lands (1,100 acres) would make additional portions of the river accessible to fishermen. Also, there would be increased whitewater boaters including those boating and fishing the river causing increased harvest of fish. Water quality would be maintained thereby helping to protect the fish population.

While this alternative has the potential to cause significant reductions in fish populations, it is felt that the changes would be minor and populations would remain stable because:

- The Forest Service would not publicize the fact that there are additional public lands;
- The new trails would be short and located away from the river;
- The Forest Service would regulate commercial guide operations through the commercial permit process and thereby limit the impact from guided fishermen;
- The Washington Department of Wildlife has indicated its intent to implement stronger fish harvest regulations as early as 1992.

CUMULATIVE EFFECTS

While the amount and type of fishing is expected to be the greatest influence on resident fish, other factors contribute to the well-being of the fish population. Resident fish are directly dependent on the amount and type of habitat available.

Water quality and quantity are the most important elements concerning fish habitat and these are affected by land uses and developments both within and outside the designated river boundary (see cumulative effects for water in this chapter). Residential development and timber harvest vary by alternative, as do subsequent cumulative effects.

Tributaries feeding the designated section of the river affect water quality and quantity. Additionally, resident fish that spawn in these tributaries are affected by the water quality of these side drainages. Recruitment of new fish into the main river could be adversely affected if water quality of these creeks deteriorates. Because the designated river corridor is relatively small, cumulative effects on the fish population from water quality are expected to result primarily from activities occurring outside of the corridor. The effects would be influenced by the decision for the Wild and Scenic River suitability study on the upper part of the White Salmon River.

Another factor which could add to the cumulative effects on resident fish would be the reintroduction of anadromous fish above Condit Dam. If steelhead are reintroduced, there would be a reduction in the number of resident rainbow trout population (Weinheimer, 1990). The reintroduction of salmon would have a slight negative effect on the rainbow trout (Draft White Salmon Productivity Report, 1989). The decision

for reintroduction is expected to be made after this EIS is published.

MITIGATION MEASURES

Mitigation measures to protect resident fish populations are primarily designed to regulate the amount and type of fishing occurring on the river. The Washington Department of Wildlife could implement harvest regulations that would affect the fishing season, the type of bait and hooks used, and the number of fish taken. If none of these techniques were effective in protecting the fish population, the state could prohibit fishing on the river.

The Forest Service could also implement measures if the state chooses to not participate in protecting the fish population. Fishing opportunities provided by outfitters and guides could be limited through the special use permits required for all commercial activities on the river. Also, the Secretary of Agriculture could issue a regulation that would limit access or the carrying of fishing equipment on national forest land or on the Wild and Scenic River, which would indirectly prevent fishing on the river. It is anticipated that the Department of Wildlife will provide the type of measures to adequately protect the fish population and that the Forest Service will not have to exert its full authorities under the Wild and Scenic Rivers Act.

EFFECTS ON PLANTS AND ANIMALS

INTRODUCTION

Trends for plants and animals are difficult to adequately assess. Habitat within alternative boundaries and the protective measures of each alternative are important, but may not address biological processes on a community scale. Impacts to most plants and animals of the lower White Salmon area are cumulative, originating both within and outside the designated river corridor. Effects of the alternatives as they relate to private lands are based on observed trends of private land management.

ALTERNATIVE 1

In general, diversity would be reduced because agricultural and residential activities would likely dominate the river corridor. Mature and old-growth conifer and oak forests would be reduced in total acreage. Most stands would be managed under a shortened rotation allowing conifers to reach 60-80 years. Conversion of mature/old-growth forest to early successional forest would eliminate goshawk nesting habitat, pileated woodpecker, and pine marten habitat.

Land fragmentation would likely occur on private lands where natural forest and meadows are broken up into smaller parcels of land and/or converted into agricultural lands. Wildlife habitat fragmentation also occurs when barriers such as roads, fences, residential areas or other activities interfere with access to traditionally used areas. This alternative, more than any other, would modify the river's unique role in providing connectedness to adjacent lands.

Private landowners would be responsible for complying with the Endangered Species Act, with the responsibility for monitoring placed entirely on the state and federal wildlife agencies. Collection of baseline information on plant and animal communities is less likely to occur on private land. Therefore, assessment of future activities on private land and associated impacts on threatened and endangered species are not

as likely to be monitored. This alternative could have the greatest adverse impacts to the sensitive plant species in the drainage. Many of the documented and suspected species in the corridor would be negatively impacted by timber harvesting and scarification, livestock grazing, farming, residential development, and off-highway-vehicle use.

Oregon white oak may be severely reduced in favor of commercially valued conifers, or residential and agricultural land conversion. Loss of the oak component and the forage associated with oak acorns would negatively impact western gray squirrels, deer, turkeys, and cavity nesting birds. The use of the river corridor by migrating spotted owls, deer, turkeys and wintering bald eagles would be negatively impacted if habitat alteration and development is allowed within 200 feet of the river. The impacts of this alternative are somewhat dependent upon the forest management practices the Washington State DNR develops and administers. Oak stands that provide important deer winter range, and riparian lands may be protected and enhanced, depending on the forest management practices revisions that are anticipated to be developed in the next few years.

Human activity associated with recreational use along the river could be negligible or substantial, depending on private land management and access to the river. Wildlife such as goshawk, bald eagle, and western gray squirrel are likely to abandon areas of high human use. Under this alternative, access to the river could be more restrictive due to private land ownership, resulting in less impact to the above-mentioned species.

ALTERNATIVE 2

This alternative would allow for the potential natural diversity of the area to be recreated through natural ecological processes. Using only natural ecological processes would result in slower change, but would assure that known and unknown ecological relationships and communities would be provided for. Although fire is a

natural ecological process, it is not likely to be left to burn due to the close proximity of private land. If natural processes are allowed to occur, some late succession and old-growth plant and animal communities would persist within the designated river boundary. The total acreage in this alternative may not be large enough to support nesting bald eagles, pileated woodpeckers, mountain lions, spotted owls, or other species requiring large, unfragmented territories. Any increases in late successional communities would provide some balance with the early successional stages found on the adjacent private lands. Early to middle successional plant and animal communities would still dominate the area although this alternative provides the best balance. Managing for uneven-aged forest would increase the structural diversity in the corridor.

Connectedness between the river and adjoining uplands would be best maintained with this alternative. Within the boundary of this alternative, management of deer travel corridors into Buck, Spring, and Rattlesnake Creeks would be protected and maintained. Deer winter range within the river corridor, Buck, Rattlesnake, and Spring Creeks would receive the most protection from residential development and land conversion.

This alternative would provide the highest likelihood of conducting extensive plant and animal surveys. Threatened and endangered species would be monitored and protected under this alternative. Though recreational activities would occur under this alternative, there would be little increased impact on the plant and animal communities because access would be centered around currently used sites. Adverse impacts to eagles, deer, turkeys, and goshawks would be minimal due to the lack of off-road use and trails. Re-establishment of a nesting bald eagle population in the White Salmon drainage would still require protection of eagle nesting habitat, in addition to foraging habitat. The canyon and up to a 400-foot buffer along the river corridor would be protected from habitat alteration. Sensitive plants would be protected against adverse grazing impacts through the development of protective measures applied to all allotment management plans.

White oak expansion would occur at a slower rate as a result of fire management. As a seral species, oak has evolved with and been perpetuated by disturbances such as fire. Natural seeding, windthrow, disease and seed dispersal from animals are all available means for the expansion and maintenance of oak communities under this alternative. Because Douglas-fir grows at a faster rate than oak through natural processes (other than fire), the total acres of oak may decrease. The management of oak communities provided by this alternative is less effective than Alternative 3.

This alternative would result in the fewest impacts to plants and animals resulting from human activity, and, therefore, would allow more options in the future for managing biological diversity. Since there would be no new trails, developed recreation sites, or access within the boundary, disturbance to plants and animals from the presence of humans would be minimal.

ALTERNATIVE 3

This alternative would maintain the current level of diversity through the application of natural and prescribed habitat enhancement tools. Using enhancement projects, this alternative would maintain the largest amount of oak in the lower White Salmon corridor. The enhancement of oak communities would increase the quantity and quality of foraging and nesting habitat for western gray squirrels, turkeys, deer, pileated woodpeckers, and cavity nesting birds. Deer winter range, primarily savanna oak stands, could be enhanced and expanded using prescribed fire, seeding, or cutting. Riparian communities do not currently appear to need enhancement, but the option for such work exists within this alternative.

Clustering residential development would reduce impacts to plant and animal communities resulting from land excavation. Clustering would minimize displacement of animals from the larger area of the river. Protection of Rattlesnake and Spring Creeks in this alternative would provide unfragmented travel corridors for wildlife between the river and upland areas.

Threatened, endangered and sensitive species would be inventoried and protected throughout the 1,000-foot average boundary of this alternative. Oak, old-growth, riparian, and canyon communities would be inventoried and protected within the 200-foot buffer. The canyon ecosystem would be protected in its natural state by the 200-foot buffer. Although this buffer would not be large enough to support nesting of animals which require large, unfragmented stands of late to mature forest environments, it would be sufficient, though minimal, to meet the current use of the corridor by bald eagles (foraging). This same buffer would allow for the potential use of the river by northern spotted owl as a travel corridor and for dispersal.

Approximately 50% of the primary and secondary Oregon white oak stands would not be protected within the boundaries of this alternative. Modification or reduction of deer winter range, habitat for turkeys, western gray squirrels, and cavity dependent birds and mammals would increase the importance of maintaining these habitats within the corridor.

New developed recreational sites would be centered around currently developed areas, resulting in minimal impacts to plants and animals. Developing interpretive trails and sites around the 40-acre parcel of mixed oak/conifer land acquired by the Forest Service may reduce the use of this stand by goshawks and western gray squirrels, which require undisturbed environments. Interpretive trails away from, but parallel to the river between the 40-acre parcel and BZ Corner, may displace wildlife from this area. Because distances are so short, people would find their way from the trails down to the river and into the riparian area causing some damage to vegetation and impacting wildlife. The degree of displacement is related to the amount and timing of human activity.

ALTERNATIVE 4

This alternative could result in 25% loss of forested habitat to agriculture, thus reducing biological diversity. This change in land use

would provide more foraging habitat for early successional wildlife species, such as deer, ruffed grouse, and mountain quail. If the conversion is from oak to agricultural lands, western gray squirrels, cavity dependent birds and mammals, and deer would be negatively impacted. These impacts would include loss of nesting and foraging habitat and cover associated with oak. Conversion of conifer forest to agricultural lands would eliminate the cover, nesting and foraging habitat of wintering bald eagles, goshawks, and western gray and northern flying squirrels, all of which are associated with mature forest communities. The 100-foot buffer would not maintain sufficient habitat for species requiring large unfragmented stands of late to mature forest environments, and would probably be inadequate even for foraging by bald eagles or as a travel corridor for spotted owls.

Residential development, with the associated human activities and presence of domestic animals, could significantly impact the use of the 100-foot buffer by most wildlife species. Deer migration corridors along the river and lateral drainages would be impacted by trails that bisect or run parallel to the river. The potential and extent of this impact would be dependent upon the timing of use by humans. September to May would be the most critical time to minimize human use along these trails. Human activity along the interpretive trails and recreation sites around the 40-acre parcel of public land would displace wildlife species such as the goshawk and the western gray squirrel from the area. Increased human activity associated with developed picnic sites would also reduce the usable wildlife habitat. Potential for impacts to sensitive plants found around Spring Creek would be increased with a developed picnic site there. Only riparian habitat would be maintained under this alternative.

Residential uses and habitat alteration outside the 100-foot buffer may result in the abandonment of the river corridor by wintering bald eagles. Without grazing plans, sensitive species within allotments may be adversely impacted. The canyon ecosystem would be protected by the 100-foot buffer described in this alternative.

Oak would have to be maintained in order to protect cavity excavators and the pileated woodpecker. This may require the preservation of all of the oak in the buffer.

In general, any increase in human access and activity within the river corridor would be likely to impact most wildlife using the same areas. Large raptors, such as goshawks, eagles, and owls, would abandon areas of constant human use. Deer would alter their use of foraging and hiding areas, selecting alternate migration routes, and often avoiding sites or using them only at selective times. In areas of high human use, there is increased potential for loss of sensitive plant species and communities from habitat alteration or other actions, such as collecting.

ALTERNATIVE 5

This alternative emphasizes the recreation resource, providing minimum protection and management of wildlife and plant communities in the river corridor. The effects of this alternative would be similar to Alternative 4, with these additions. Recreational use would be expanded throughout the year, which could reduce the use of the river by wintering bald eagles. Wildlife could be displaced from in and around the area where the overnight campground is developed, at least during the use season; off-road vehicle use over the entire area would adversely affect wildlife migration routes and habitat, potentially displacing wildlife from the area during periods of heavy use. If off-road vehicle use consistently occurs in the river corridor most animals would be permanently displaced from the area.

This alternative would have impacts on sensitive plants. Without a comprehensive inventory of the area and with the allowance of dispersed off-road vehicle use, sensitive plants would not be protected. Vegetative communities in and around the developed campground would receive some damage. Because distances are so short, people would find their way from the trails down to the river and into the riparian area causing some damage to vegetation and impact to wildlife. Livestock grazing plans could protect sensitive plants within riparian and wetlands communities.

Outside of these areas grazing could adversely impact sensitive plants.

In general, oak, riparian, and old-growth communities would not be protected. As a consequence, goshawks, deer, turkeys, bald eagles, pileated woodpeckers, and western gray squirrels would lose their foraging and nesting habitat. Without protected nesting and winter habitat, bald eagles might not re-establish a nesting population or continue to use the White Salmon drainage as a wintering area.

ALTERNATIVE 6

Effects to plants and animals in Alternative 6 are similar to those of Alternatives 2 and 3. The significant difference from Alternative 3 is that more land would come into the National Forest system providing the potential for greater protection. Alternative 6 does contain strategies to protect and enhance white oak, old-growth and other important vegetative communities. While these strategies would not be limited to natural ecological processes as in Alternative 2, they would be specifically designed to enhance those vegetative communities and overall biodiversity. The requirement of inventories on National Forest System lands would increase the knowledge base about vegetative communities and aid in the long-term protection and enhancement of the resource.

Alternative 6 goes beyond the other alternatives in requiring further studies to determine whether biodiversity is an outstandingly remarkable value. This would include more detailed inventories of the White Salmon River valley as well as other drainages within the region.

Plants and animals would benefit from the relatively large blocks of public lands connected with the 200-foot river buffer rather than smaller, more disturbed and scattered areas receiving protection in the other alternatives

This alternative would have the greatest amount of land in federal ownership of any of the alternatives. (The Forest Service, through a three-way land exchange agreement with SDS

Lumber Company and the Washington State Department of Natural Resources, would acquire all of SDS's land within the boundary - over 700 acres, and an estimated 40% of the shoreline.) However, dispersed recreation use would not be encouraged on these lands. The short interpretive trails would provide some access to these lands, but would not provide hikers or anglers direct access to the river.

New developed recreational sites would be located in currently developed areas, resulting in minimal impacts to plants and animals. Developing interpretive trails and sites around the 40-acre parcel of mixed oak/conifer land acquired by the Forest Service may reduce the use of this stand by goshawks and western gray squirrels, which require undisturbed environments. Interpretive trails may displace wildlife from the areas in which they are located. Because distances are so short, some people would find their way from the trails down to the river and into the riparian area causing some damage to vegetation and impacting wildlife. The degree of displacement is related to the amount and timing of human activity.

CUMULATIVE EFFECTS

Most of the lands inhabited by most of the larger animals in the lower White Salmon River drainage would not be covered under any of the proposed alternatives. Persistence of these animals depends primarily on private land management.

Past trends in the lower White Salmon River corridor have included conversion of native grass, shrub, and forest lands to agricultural uses such as orchards and hayfields. Much of the forested land has been harvested. Control of natural fires has resulted in loss of Oregon white oak through competition with Douglas- fir. In general, successional diversity has been reduced in the lower White Salmon with early-to-mid-successional communities now dominating the landscape.

Increased human settlement has occurred along the river, as has recreational use. Associated with humans are pets, roads, fences, and other

structures and activities that function as barriers to natural plant and animal communities.

The long-term scenario for the lower White Salmon corridor includes influences from recreational and residential growth in the Columbia River Gorge, neighboring communities and forests. For native plants and animals, the long-term picture is not favorable for their persistence, particularly for sensitive and rare species with little flexibility.

Increases in the residential and recreational uses of the lower White Salmon river corridor would lead to fragmentation of native wildlife ranges, creating more edge and less use. In the past, increased edge was interpreted as providing more diverse wildlife habitat. More recent information indicates edge can result in loss of animals that live deeper in the forests. At the current rate of fragmentation of lands in the drainage, wildlife requiring large acreages, such as bald eagles, mountain lions, pileated woodpeckers, spotted owls, pine martens, and goshawks may disappear within the next 15 years. Deer survive well in early successional plant communities; however, they are intolerant of and vulnerable to harassment from dogs and human-related activities.

Exotic and noxious plants and animals are likely to be introduced into the corridor with increased human settlement and land conversion. These introduced species often out-compete the native species of a region. The results of this type of competition and loss of native species probably has greater ramifications to the balance of nature than is currently understood. Human activities and disturbances associated with residential uses outside of the designated river boundary would displace wildlife away from the river. Dogs and roads cause more death to deer than any other cause, including hunting.

Increased recreational use in the lower White Salmon area outside public lands is likely to impact public lands with or without restrictive buffers and wide boundaries. Impacts include habitat alteration from off-road vehicle use, trails, introduction of litter, and the general impact of the human presence.

Past trends in conversion of late successional plant communities to early successional are expected to continue. Again, the associated animal communities would be converted, resulting in more species, such as woodrats, skunks, horned larks and mountain quail, and fewer species such as the bluebird, gray squirrel and marten.

Review of the rare (threatened, endangered, and sensitive) plants and animals of the area illustrates species that require large, unfragmented lands, often require late successional forested lands, are inflexible in their ability to adapt to rapid habitat modification or loss, are sensitive to contaminants, or are easily hunted. These threats and the conditions mentioned above describe the current and likely future conditions of the lower White Salmon river area. These conditions are not likely to add to the recovery or even maintenance of threatened, endangered and sensitive species at the population level.

MITIGATION MEASURES

One of the most important measures for effective mitigation of effects to plants and animals is knowing what species and habitats are present - the more comprehensive the inventories, the greater the potential for successful mitigation. All alternatives provide for inventories at some level.

Monitoring for adverse effects to the plants and animals and their habitats will be critical to the initiation of some mitigation measures. The monitoring plan provides for monitoring of several aspects of biological conditions, including shifts in acres of vegetative communities, population trends of the management indicator species for mature and old-growth forest (pileated

woodpecker), species on the Region 6 Sensitive Species List, and effects of recreation use on wildlife and vegetation.

Mitigation measures to protect plants and animals and their habitats, including listed species include:

- Maintaining a buffer of generally undisturbed vegetation on each side of the river,
- Prohibiting or limiting grazing within the boundary,
- Eliminating or limiting off-road vehicle use to existing trails, in alternatives where this use is permitted,
- Closing roads on federal lands which are not needed for administrative purposes,
- Maximizing the size of undisturbed areas and maintaining adequate thermal cover in areas identified as deer winter range,
- Providing additional protection to areas where listed species are found, including wintering areas for bald eagles, and
- Encouraging land owners to protect and enhance the diverse vegetation communities, such as Oregon white oak/conifer mix, which in turn would protect the biodiversity of the area.

Additional mitigation measures to protect plants and animals will be initiated if necessary when adverse effects are created by new developments and uses. These mitigation measures will, of necessity, be determined on a case-by-case basis.

If adverse effects due to activities outside the boundary are discovered through monitoring, the Forest Service will encourage the state or county authorities to take appropriate actions or, if possible, initiate a cooperative agreement with the land owner to arrive at a mutually acceptable management scheme.

EFFECTS ON CULTURAL RESOURCES

INTRODUCTION

There are four known cultural properties within the river corridor. One is a recorded prehistoric site, one a recorded prehistoric site with a historic component, one unrecorded prehistoric site (with a possible historic component) and an historic American Indian cemetery that is still in use today.

With the exception of the cemetery, the other cultural properties are potentially significant, that is, likely to contain important information on history and prehistory. The cemetery is not considered an archaeological site, but rather a registered cemetery. It will be specifically addressed in the alternatives. The historic and prehistoric archaeological sites are not addressed specifically in the alternatives, as they have not been evaluated.

Due to the relatively low intensity and high bias (due to access problems) of the archaeological field inventory, there is a high probability that additional significant cultural properties are present. There are also a number of knowledgeable American Indian residents in the area who are likely to have information pertaining to existing sites and traditional uses, for which no other record exists.

Each of the above concerns will be addressed, by alternative, below.

ALTERNATIVE 1

Federal acquisition would not be a management option under this alternative. Without the option of acquisition, alternatives for protection of significant cultural properties on private lands would be limited to those under existing federal and state laws and county zoning requirements. This may result in the loss of significant cultural properties and the loss of scientific and cultural information. Access to cultural properties or traditional use areas would be dependent upon the property owner's willingness to grant access.

Without access, resource opportunities for American Indians may be lost.

In cases where a significant cultural property is identified on private land and is sufficiently important or sensitive to preclude development, owners may not be able to use their property to their intent, and would suffer a loss of opportunity without compensation. As a consequence, there may be little incentive for a property owner to maintain a cultural property and prevent its deterioration.

A consequence of project-specific field, archival, and other inventories is that each property would be evaluated in isolation from the larger cultural perspective of the valley. Unknown cultural properties or traditional use sites would not be protected. As a consequence, some knowledge and material culture may be lost, such as knowledge of traditional resource gathering areas.

The cemetery would continue to be managed and used as at present. As a result, there may be vandalism problems as it becomes known to a wider number of people. The cemetery may be expanded to its full ½ acre size under the existing easement with the property owner. This would result in continued use for a limited period of time, but would not allow for alternative management and protection.

Management under this alternative would mean that known and unidentified cultural properties would continue to be affected by natural processes and incidental effects, such as recreational use and inadvertent project impacts. In addition, traditional use sites would not be identified or protected. The lack of a monitoring program would mean that these incremental yet cumulative effects would remain unknown. Properties may be lost or significantly damaged before such effects are recognized.

The type and extent of archival and oral history information would remain unknown, and oppor-

tunities for gaining oral history information would continue to decline as memories fade and knowledgeable individuals die or move away.

ALTERNATIVE 2

A comprehensive inventory and evaluation of all land within the maximum boundary of the White Salmon River drainage would allow the synthesis of all cultural resource information within the drainage. All privately-held significant properties, spiritual and traditional areas would be protected through acquisition by fee or through easement. This would facilitate a systematic and cohesive program of protection for archaeological and historic sites, as well as traditional use and spiritual areas.

Such a synthesis would allow for the development of site-specific management plans for each site, as well as a monitoring plan, within this regional framework. The effective benefit is that interpretation could be oriented toward historic and prehistoric cultural systems, rather than individual properties. In addition, the management of this cultural system would allow for potential insights as new information arises from future information or research.

The existing cemetery would continue to be managed as it currently is, although additional land may be acquired to allow for future expansion. Cultural properties related to the cemetery, such as sites associated with individuals buried there, could be identified for acquisition or interpretation. The net effect would be the integration of the cemetery with other cultural properties within the area, which would increase the informational potential and significance of the properties concerned.

Acquisition of significant cultural properties would be an important management option under this alternative. This would enhance protection options and allow for the development of comprehensive and specific management plans for cultural properties. Access to cultural properties or traditional use areas could be made available through acquisition or easement. This

could facilitate the exercise of treaty rights and would help to maintain cultural traditions and lifestyles. Where appropriate, interpretation and enhancement of traditional cultural properties could be undertaken.

A program would be established for the monitoring of all cultural properties. Detection of damage, whether deliberate or incidental, would trigger protective or restorative actions defined within the comprehensive cultural resource management plan for the area. This alternative would significantly strengthen and enhance the protection of cultural properties over Alternative 1.

ALTERNATIVE 3

This alternative would result in an inclusive, comprehensive data base upon which to design cultural resource management plans and monitoring programs that address the entire range of cultural properties and traditional uses. This would provide opportunities for development of site-specific management plans, as well as a comprehensive monitoring plan.

While the objectives of the inventory and evaluation would be similar to that of Alternative 2, it would be less comprehensive. Properties outside of the existing river boundary would not be included in the synthesis.

Unlike Alternatives 1 and 2, significant cultural properties would be prioritized for phase acquisition. Although critical sites would be earmarked for federal acquisition, less significant sites would not be acquired and might be damaged or lost.

The cemetery would continue to be managed as in Alternative 2, with similar potential for vandalism and a lack of integrated interpretation or management. Some additional land could be acquired to allow for expansion, as well as to maintain the visual qualities of the area. Cultural properties related to the cemetery, such as sites associated with individuals buried there, could be identified for acquisition or interpretation. Such efforts would be less comprehensive in scope than those in Alternative 2.

Under this alternative, opportunities for the exercise of reserved treaty rights could be identified, based on information gained through archival research and oral histories. Traditional cultural properties might be made accessible for hunting or gathering traditional foods and materials through acquisition of land or easements. In addition, areas suitable for the reintroduction of traditional plants and other resources could be identified and cultivated.

A program would be established for the monitoring of sensitive cultural properties. This is different from Alternative 2, in that properties would be prioritized for a limited monitoring plan. As with Alternative 2, detection of damage would trigger protective or restorative actions.

Compared to Alternative 1, this alternative would significantly strengthen and enhance the protection of cultural properties, but would be less comprehensive than Alternative 2 due to the smaller area to be inventoried and managed. However, within the limitation of a smaller area, it would provide similar advantages of comprehensive interpretation of the history as with Alternative 2. In addition, the reduced acquisition/easement effort would result in a less comprehensive, more selective program of federal or state acquisition. There would be some lost opportunities as only the priority sites would be acquired. As with Alternative 2, adverse effects to cultural properties would not be allowed where those effects could not be mitigated.

ALTERNATIVE 4

As under Alternative 3, the Forest Service would conduct a comprehensive inventory of all sites on public land within the existing boundary and where access could be gained to private lands. Because this involves a smaller area, fewer cultural properties would likely be inventoried and protected. The potential lack of access to private land would mean that significant cultural properties would remain uninventoried. In addition, the lack of an oral history program could preclude obtaining information that would be useful for evaluating cultural properties. Unlike Alternatives 2 and 3, the lack of a

comprehensive inventory and oral history might significantly reduce the opportunity to locate, evaluate, protect, and interpret cultural properties.

Cultural properties located under this alternative would still be evaluated for their potential eligibility to the National Register of Historic Places, but only the highest-priority sites (including traditional use and spiritual areas) would be acquired.

The cemetery would be managed similar to Alternative 1. Additional land could be acquired for expansion as in Alternatives 2 and 3.

Due to constraints upon inventory and evaluation, there would be limited opportunities to identify significant traditional use areas. Such areas, when identified, would be prioritized and acquired only if necessary to protect them from adverse effects. Similarly, prehistoric and historic cultural properties would be prioritized for acquisition in response to the significant potential for adverse effects. The consequences of this alternative are that historic, prehistoric, and traditional use properties not identified or prioritized might be lost. This might reduce the opportunities for exercise of treaty rights, as traditional areas might not be returned to public ownership. A limited monitoring program of specific cultural properties would periodically assess their condition.

Interpretation would be more constrained than in Alternatives 2 and 3. While this alternative is more protective than Alternative 1, it is less so than Alternatives 2 and 3.

ALTERNATIVE 5

As with Alternative 1, historic and prehistoric cultural properties would be managed by the state and county under existing federal and state law, and known properties would be protected from project effects. The lack of a comprehensive inventory might result in damage or destruction of significant cultural properties. The presence of a cultural property that is incompatible with recreation or other objectives

might preclude acquisition of the cultural property.

Acquisition of cultural properties would only be made if compatible with multiple resource objectives, with the result that interpretation plans would be developed only in conjunction with existing or planned facilities. Unlike Alternatives 2 and 3, and to an extent Alternative 4, there would be no overall plan of evaluation, interpretation, protection and acquisition. Overall, there would be significant potential for loss of scientific, cultural, traditional, and interpretive information.

The cemetery would continue to be managed as under Alternatives 1 and 4, but acquisition of additional land would not be considered. There would be a corresponding potential loss of the opportunity for expansion and continued use of the cemetery, as well as maintenance of its present visual setting.

Areas identified as significant for the exercise of traditional uses other than fishing would be acquired only if compatible with other multiple uses, and if those uses would not harm those values. Unlike Alternatives 2, 3, and 4, this alternative might result in the loss of the opportunity to comprehensively manage traditional use areas, with a resultant loss of the opportunity to continue traditional cultural lifestyles. There would be a minimal opportunity to enhance the exercise of treaty rights in the absence of an acquisition program.

This alternative provides less protection and interpretation opportunities than Alternatives 2 through 4, but some degree of protection greater than Alternative 1. Previously unrecorded cultural properties might be adversely affected if encountered during project activities; if not noticed, they might be significantly damaged or destroyed.

The delay of cultural resource inventories until recreation or other development sites are selected might reduce options for avoidance or project redesign, and force mitigation measures upon a cultural property. Interpretation opportunities would be severely limited. Acquisition of signifi-

cant traditional use or other areas would be constrained. The adaptive reuse of American Indian sites might be considered, provided that such use would not adversely affect the values of an existing cultural property that makes it significant.

ALTERNATIVE 6

Cultural resource inventory under this alternative combines elements of Alternatives 2 and 3. The Forest Service would conduct a comprehensive and systematic oral history and archival inventory of all cultural resources within the White Salmon River drainage. All public lands would be inventoried by the Forest Service. The Forest Service would conduct cultural resource inventories on private lands in response to specific development proposals upon notification by the county. Although not all lands would be surveyed as under Alternative 2, this alternative would offer the opportunity for a progressively complete inventory of the river valley without placing undue demands upon private property owners.

Cultural properties located through the oral history, archival research, and field inventories would be evaluated by the Forest Service for their significance. Significant sites would be designated as outstandingly remarkable (OR) values and identified for protection. Significant sites on private lands would be monitored and prioritized for acquisition. This approach combines elements of Alternatives 2 and 3, with the specific provision for acquisition of the longhouse site for traditional uses. Due to the lack of a comprehensive field inventory, sites might have to be evaluated on an individual basis, rather than as a system. Likewise, management plans could not be developed for all cultural properties as a population.

Interpretive objectives would be the same as those for Alternative 2. An overall interpretive management plan would be developed for all types of cultural properties. Interpretation might be either on-site, or off-site, depending upon resource sensitivity and the need for confidentiality. Sites requiring confidentiality would not be identified to the public. The goal of the overall

interpretive management plan would be to synthesize the history of human use and occupation within the drainage. A potential shortcoming under this alternative is that due to the lack of a comprehensive inventory, a synthesis of the cultural properties would not be available for interpretive purposes. Interpretive materials would have to be updated as the cultural resource inventory expands.

This alternative provides most of the benefits of Alternative 2, with the significant exception of the comprehensive inventory of private lands. Unless a cooperative agreement were established with the county for notification to the Forest Service, significant development actions on private lands within the boundary would probably not receive cultural resource field inventories. If an agreement were established, the Forest Service would provide for field inventories for those proposed developments that could potentially affect known or potential cultural properties. This approach would relieve the property owner and the county of the responsibility of cultural resource inventory and evaluation. Significant sites would be targeted for acquisition and conservation management.

Acquisition would be similar to that for Alternative 2, with a prioritization of sites for acquisition as under Alternative 3. The Forest Service would acquire or facilitate the acquisition of the longhouse site by another entity. As with Alternative 2, acquisition would enhance protection options and allow for the development of specific management plans for cultural properties. Access could be made available through acquisition or easement.

As under Alternative 2, a monitoring program would provide for a constant process of evaluating site conditions and effects that could potentially affect a site's status as an OR value.

Interpretation and public information and education objectives would be similar to Alternative 2. The focus of interpretive activity would be at Husum, where an off-site interpretation facility would be established.

CUMULATIVE EFFECTS

Under Alternative 1, cumulative effects would not be easily assessed. Rather than obtaining a complete picture of the effects on cultural resources, the lack of a comprehensive inventory, evaluation, and monitoring plan would limit an effective analysis to individual cases. The cumulative effects could not be quantitatively assessed. The lack of an acquisition program would prevent the acquisition of properties being adversely affected.

Under Alternative 2, with its comprehensive inventory, evaluation, interpretive and monitoring plans, effects to individual properties could be quantitatively and qualitatively evaluated in a holistic perspective. Categories of significant information would be available, against which losses of individual properties could be measured. Acquisition of any cultural property or traditional use area would be undertaken to prevent adverse effects.

Under Alternative 3, the assessment of cumulative effects would be more constrained than Alternative 2, but more complete than Alternative 1. Uninventoried private lands might contain cultural properties which would not be recorded, hence their deterioration or loss might not be detected or evaluated. This lack of knowledge could inhibit effective cumulative effects analysis and, for purposes of acquisition, could result in identifying only those properties with significant deterioration of cultural resources or that experience adverse effects.

The evaluation of cumulative effects under Alternative 4 would be similar to those under Alternative 3, but would be slightly more constrained. The lack of oral history information may result in the omission of cultural properties or traditional use areas which then could not be monitored and evaluated for cumulative effects. The acquisition of only the highest-priority sites could be driven by selecting those with the greatest degree of adverse effects.

Cumulative effects under Alternative 5 would be similar to, but more constrained than Alternative

4, due to the greater restrictions on acquisition. Acquisition of cultural properties may not be allowed where resource values were undergoing adverse effects.

The cumulative effects of Alternative 6 are substantially favorable. The comprehensive archival inventory is intended to retrieve relevant data that is presently scattered among several institutions and collections. A comprehensive oral history would assure a written record of memories of persons who are knowledgeable about the histories and cultural resources of the area.

On the other hand, Alternative 6 lacks a comprehensive archaeological inventory on private lands, which might hamper the discovery, evaluation, and interpretation of each archaeological or historic property. The discovery of cultural properties on private lands likely would depend upon a project proposal in the area, which could trigger an archaeological inventory. This discovery of cultural properties on an individual, rather than collective basis, runs several risks. (1) Cultural properties might be lost in the development process due to a lack of an organized survey, or the lack of a survey altogether. (2) There may be a lack of other cultural sites to allow adequate comparisons for determination of significance. (3) Analysis and interpretation of cultural sites on private land might not be accomplished until sometime in the indefinite future when the landowner proposes to develop the property. This situation would not allow the site to be protected against deterioration, and

knowledge of the site would not be used in developing an interpretive plan. These same risks are inherent in Alternatives 3, 4, and 5.

MITIGATION

Mitigation measures under Alternative 1 would be restricted to a review of potential effects on a project-by-project basis. As a consequence, mitigation would be reactive to existing or pending adverse effects. Acquisition would not be allowed.

Alternative 2 provides the greatest degree of options for mitigation, ranging from acquisition and monitoring to adaptive re-use. All cultural properties would be monitored and protected.

Alternative 3 protects cultural properties nearly as well as Alternative 2, and much better than Alternative 1. However, mitigation measures would have to be prioritized, rather than comprehensive, as with alternative 2.

Under Alternative 4, only the highest-priority sites would be acquired to prevent adverse effects. Otherwise, this alternative is similar to Alternative 2.

Under Alternative 5, mitigative options would be similar to Alternative 1, except that properties may be acquired if protection objectives are compatible with other multiple-use objectives.

Mitigation in Alternative 6 would be similar to Alternative 3.

EFFECTS ON RECREATION

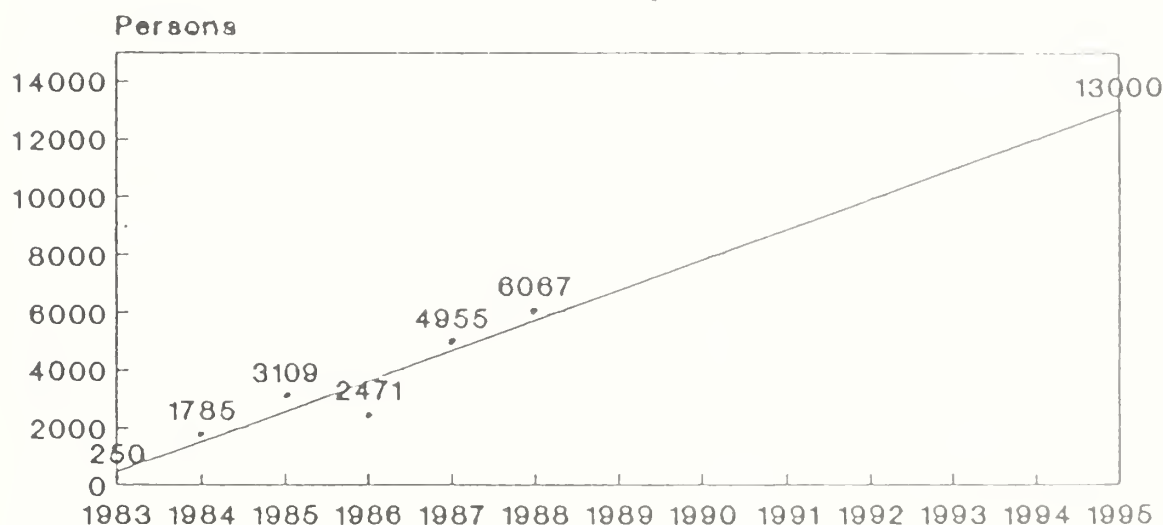
INTRODUCTION

Recreation opportunities are made up of the physical and biological environment (including the character of the landscape, level and type of development present, and fish and wildlife), the social environment (the amount and type of people who use the recreation setting, what activities they engage in, and what type of experiences they have), and the managerial environment (the level, type, and location of public access, facilities and improvements, interpretation and education efforts, and regulations). Recreation experiences and opportunities may be affected by a number of factors. These include logging, farming, grazing, water development, wildlife and fishery management, amount

of residential, commercial, and facility development, degree of regulation, and various types of recreation activities occurring in an area (Cole 1988).

Early in the planning process, the lower White Salmon sub-group of the Task Force identified several issues regarding recreation. These included protecting the natural character of the river, providing recreation access, providing opportunities for private and commercial whitewater boating while minimizing conflicts, safety problems and loss of enjoyment due to crowding, providing opportunities for other types of recreation, and minimizing impacts to private property. This section describes how the management alternatives affect recreation and respond to these issues.

Figure IV-1: Projected Recreation Use, 1983 to 1995



- Figures in the graph above are based on records kept by Viva Smith at Northwestern Lake Campground 1984 to 1988. Figures are estimated from the recorded number of commercial and non-commercial rafts using the take out.
- An average raft capacity of six persons per raft was used to calculate totals. Totals include an estimated one kayaker for every twenty rafters using the NW Lake take-out.
- Totals omit all kayaks and rafts taken out at Husum Falls.
- Totals also omit non-commercial rafters who camp at the lake after they take out, but Viva Smith estimates this number to be nearly zero.

OPPORTUNITIES FOR PRIVATE AND COMMERCIAL BOATERS

Issues raised during the planning process relating to whitewater boating opportunities are: how much whitewater recreation would occur, how would "over-use" be determined, and how would use be allocated between private boaters and commercial outfitters in the event that boating opportunities became limited in the future? While many concerned parties do not favor restricting opportunities, they are also concerned that the quality of the boating experiences may deteriorate in the future due to increasing use.

ALTERNATIVE 1

This alternative would allow the most significant increase in opportunities for whitewater recreationists to float the river because no efforts would be made to determine a physical or social carrying capacity and limit use to that level. If current use trends continue, it is likely that more than twice as many people would float the river in 1995 than did in 1988 (see figure IV-1). While this alternative would offer the greatest number of opportunities to boat the river, the recreation experience would be quite different than that currently available.

ALTERNATIVE 2

This alternative allows no increase in opportunities for whitewater recreationists to float the river. These actions could create significant impacts to private and commercial boaters. People who have never had the opportunity to float the river might not be able to do so. Due to increased regulation of boating opportunities, boaters would be required to obtain permits in advance rather than being able to float on the spur of the moment.

ALTERNATIVE 3

This alternative allows for some increase in whitewater boating levels over Alternative 2.

If use increased to the extent that a permit system became necessary, use would be allocated

between private and commercial boaters based on percentage of use by both groups at the time limits were imposed. Use among outfitters would be allocated in the same manner. These actions would prevent new outfitters from operating on the lower White Salmon, and those currently operating would not have increased opportunities, but would be assured of providing a certain type of experience in the long term. If the ratio of commercial to private boaters changes from trends at the time limits are imposed, some permits may go unused. These represent lost opportunities for potential recreationists. Incorporating a method for redistributing unclaimed permits would mitigate this effect.

ALTERNATIVE 4

This alternative allows a moderate increase in whitewater recreation opportunities, provided that a "roaded natural" experience is maintained. Monitoring and potential management actions would be the same as in Alternative 3, but the process for limiting use would be different.

If a permit system was deemed necessary to maintain the resource and social conditions, use would be allocated equally between commercial outfitters and private boaters (50-50 split) based on use levels at the time permits became necessary. Current distribution of use between private boaters and commercial outfitters varies depending on season and day of the week; overall trends in private vs commercial use have also been changing (see Chapter III: Affected Environment). The equal split method of allocation has the advantage of superficial fairness in that use opportunities are distributed equally between private boaters and commercial outfitters. However, there is potential for serious dislocation of user groups that have historically had more than a 50% share of the use. One way to compensate for these effects would be to redistribute unclaimed permits to those who desire them.

Other effects of Alternative 4 would be similar to Alternative 3. Some people would be unable to float the river, but fewer would be excluded than for Alternatives 2 and 3. Spur-of-the moment trips would not be possible under this alternative

unless a certain number of permits were held in reserve for such purposes, or if unused permits were available, on a first-come, first-served basis.

ALTERNATIVE 5

This alternative allows a substantial increase in boating opportunities. If use increases to a point where a permit system is necessary to maintain desired resource and social conditions, a "Freedom of Choice" system would be implemented (see the recreation portion of the Detailed Comparison of the Alternatives in Chapter II, for a brief description of this system). The amount of business any guide received would be determined by the "free market." As a result, a guide could end up guiding from 0% to 100% of the clients.

ALTERNATIVE 6

This alternative establishes low to moderate perceptions of crowding as the goal for visitor contacts on the river. It requires that a limits of acceptable change (LAC) process be used to determine the standards for acceptable social conditions, rather than setting a limit on the amount of use at this time. If use does need to be limited, a non-permit method would be used which assures that each person who wants to use the river, whether as a private boater or with a commercial guide, has an equal opportunity to do so. Use would only be limited during times when the standards would not otherwise be met, and a portion of the total use would be available for "walk-ins" (people who decide to boat the river within 48 hours of the time they make their trip).

Until the time that use must be limited, both commercial and private boaters would have unrestricted access to the river. If use has to be limited in order to prevent unacceptable levels of crowding, there would be times on some days (most likely mid-days of mid-summer weekends) when everyone would not be able to run the river at their desired time. Instead, they might have to run earlier or later in the day, or wait until a weekday. If this occurs, both private and commercial boaters would be affected in proportion to the demand from each group. (For example, if equal numbers of people want to run

the river as private boaters as want to go with a guide, half the people who are able to run the river at their preferred time would be private boaters, and half would be commercial boaters. If $\frac{2}{3}$ of the people who want to run the river are private boaters and $\frac{1}{3}$ want to go with a guide, $\frac{2}{3}$ of the people who are able to run the river at their preferred time would be private boaters, and $\frac{1}{3}$ would be commercial boaters, and vice versa.) Spur-of-the-moment trips would be possible for most of the people who wanted to do it this way.

This alternative provides for a specially designed access in the Husum area for boaters with limited mobility.

Since the number of commercial guides would be limited to ten, not all the commercial guides wanting to offer trips on the White Salmon River would be able to do so. However, those who would be able to operate would likely have more clients than if the number of commercial guides was not limited.

WHITEWATER RECREATION EXPERIENCE (Naturalness, Remoteness, Solitude, and Safety)

One concern mentioned by Task Force members and recreationists interviewed on the river was maintaining the natural character of the river corridor. The extent to which individuals perceive themselves removed from the sights and sounds of human activity affects the type of recreation experience they have. Vegetative or topographic variation can increase this sense of remoteness and the associated experiences of solitude and naturalness. Although various land uses and degrees of development exist close to the river, the topography of the area throughout the majority of the corridor creates a sense of naturalness and remoteness that enhances the recreation experience for many.

ALTERNATIVE 1

Future management of the river under Alternative 1 would be likely to decrease the natural character of the river substantially. The potential

for an increase in instream structures such as diversions and irrigation pipes would detract from the natural appearance of the corridor, as well as contribute to a significant loss of water flow. After ten years, timber harvest would not be allowed within a 50-foot buffer area adjacent the river. However, in the interim, allowing a 30% harvest would reduce vegetative cover, resulting in degradation of visual quality and decreasing the likelihood of viewing some types of wildlife, both of which contribute to recreationists' enjoyment of the river. Residential and commercial development could also increase substantially, contributing to a decrease in the natural appearance of the corridor.

No land would be acquired by the Forest Service, therefore development of recreation facilities and access points would be determined by private landowners. This could result in the development of a large number of recreational facilities and/or those that would detract from the natural appearance of the river.

The resulting experience would be unsatisfactory to those seeking a natural-appearing environment, solitude, and a sense of being in a remote setting. In addition, at some point, boater safety could be jeopardized due to the combination of large numbers of boaters present, the narrowness of the corridor, the nearly continuous whitewater in several stretches, and the shortage of accessible eddies.

ALTERNATIVE 2

Management actions in Alternative 2 would enhance the natural appearance of the river corridor. Boundaries encompassing 320 acres per river mile and potential fee acquisition of up to 100 acres per river mile would increase the corridor's natural character. The 400-foot buffer of undisturbed vegetation would enhance boaters' perceptions of a relatively unmodified environment, and would increase the likelihood of viewing wildlife found in the riparian zone.

The modification or removal of existing instream structures, such as spring boxes and irrigation pipes, and the prohibition of new instream structures would augment the river's natural

character. Allowing no new water withdrawals and acquiring existing rights from willing sellers would increase instream flows and further contribute to the goal of maintaining the river corridor in a relatively natural condition. Leaving woody debris in the river channel would also increase naturalness.

Alternative 2 maintains boating use at current levels. The resulting experience would provide the greatest opportunity for solitude. It may minimize visual impacts such as litter, fire rings, disturbance to vegetation, and soils. This alternative provides public access, parking, and sanitation facilities in areas where development currently exists at BZ Corner and Husum. These actions, in conjunction with public education efforts and increased enforcement, may minimize physical impacts, thereby maintaining or enhancing the natural appearance of the river corridor. A high level of safety would be likely, compared to Alternatives 1 and 5, due to lack of congestion in eddies and at Husum Falls.

ALTERNATIVE 3

Management actions in Alternative 3 would maintain the natural character of the river to a lesser degree than Alternative 2. Narrower boundaries, less potential land acquisition, and a smaller buffer zone may result in a less natural appearing corridor. In some areas, the topography would preserve the natural character of the river, but in others, development would be more apparent. This effect could be minimized by carefully selecting areas vulnerable to visual degradation and expanding protection in those areas in order to preserve visual quality. The smaller land base within the designated boundaries may displace some wildlife, and could detract from recreationists' enjoyment of the area.

Instream management under this alternative would maintain flow levels similar to Alternative 2, but would allow limited removal of woody debris for river runners' safety. This could cause a slight decrease in the natural appearance of the river, but would increase whitewater safety.

The increase in whitewater boating use levels in Alternative 3 has the potential to increase the

likelihood of physical impacts, thereby decreasing the natural appearance of the corridor. There is not necessarily a one-to-one relationship between use levels and physical impacts, however.

Amount of use has received the most attention. However, studies show that while impacts increase rapidly as use increases from no use or low use levels to above low use levels, further increases in use have less and less effect on amount of impact (Marion & Merriam 1985; Cole 1988). Characteristics of recreationists also influence impact potential. These characteristics include: party size, length of stay, and knowledge and commitment to minimizing impacts (Cole 1988). Studies of impacts in wilderness areas suggest that concentrating use to specific areas reduces impacts to the overall area (Cole 1988). Developing a few areas where recreationists can stop along the river may decrease the natural appearance of those specific areas, but, in the long run, might decrease impacts to the river corridor as a whole. In addition, Alternatives 2-6 would involve monitoring physical impacts.

In Alternatives 3, 4, 5, and 6, the LAC framework (see Chapter II) would be used to establish acceptable levels of change in resource and social conditions. When those standards are approached, a number of management actions may be used to maintain desired conditions without unnecessarily limiting recreation opportunities. Public education efforts and enforcement of regulations would minimize the potential for impacts to increase as use levels increase.

This alternative would decrease opportunities for solitude slightly, compared with Alternative 2, and may result in slightly higher chances of safety problems at areas like Husum Falls.

ALTERNATIVE 4

Management under Alternative 4 would be similar to Alternative 3, except the buffer would be 100 feet wide, rather than 200 feet wide. Impacts to naturalness would be similar.

Management of instream resources would also be similar to Alternative 3. Additional removal

of woody debris would be allowed to protect private property; this would probably have a negligible effect on the natural appearance of the river.

Alternative 4 adds two river-accessible picnic/rest stops along the river, which would decrease perceptions of remoteness and naturalness. The benefits of these actions include providing increased facilities and convenience for river runners, discouraging trespass, reducing the potential for pollution of the river from human wastes, and concentrating use and potential physical impacts at a few developed sites.

Recreationists preferring a high degree of solitude may be displaced. Safety may decrease, due to the number of boaters present, the narrowness of the river, the nearly continuous whitewater in several stretches, and the shortage of accessible eddies.

ALTERNATIVE 5

This alternative proposes a variable buffer (50-150 feet) of undisturbed vegetation, using topographic breaks and screening vegetation to determine the appropriate width. In some places this may not sufficiently preserve the natural appearance of the river corridor. Instream management would be the same as in Alternative 4, therefore impacts would be similar to those mentioned above.

Alternative 5 proposes road access to the picnic/rest stops developed in Alternative 4, and the establishment of a campground within the corridor. Although these facilities would not be visible from the river, their presence may decrease recreationists' perceptions of a natural environment.

Because of the increased number of boaters and the people on shore in the recreation sites and hiking the trails, opportunities for solitude would be less than for Alternatives 2, 3, 4, and 6. Evidence of other users would increase more than in Alternatives 2, 3, 4, and 6, and safety may decrease substantially.

ALTERNATIVE 6

The effects of Alternative 6 would be similar to Alternative 3 in a number of ways. The buffer would be the same width (200') along all of the river except in Husum (even in Husum, the area downstream from the old Highway bridge would have special attention paid to it to avoid overdevelopment); current levels of instream flow would be maintained; the only removal of woody debris would be to prevent safety hazards and protection of streambanks; the social experience would be managed for low to moderate perceptions of crowding and the physical setting would be managed for moderate to high perceptions of naturalness and isolation, and a LAC process would be used to establish acceptable levels of change. One difference is that people would be directed away from the more isolated parts of the river by information they would receive at the interpretation facility in Husum.

RECREATION ACCESS

ALTERNATIVE 1

Management of the river under Alternative 1 would provide no publicly owned access points for boating or other recreation. Depending on county regulations and development by private landowners, access could increase significantly. The opposite could also occur - access could become more limited than it currently is, depending on whether private owners choose to allow access from their land.

ALTERNATIVE 2

This alternative includes acquisition of 770 acres of public land and identifies access specifically for whitewater recreationists at three locations. This would ensure that the river is accessible to boaters, and that the sites are maintained in a manner that meets public needs and safety. It would not provide specific opportunities for other types of recreation, but other types of recreation use would probably increase if access is available.

ALTERNATIVE 3

Alternative 3 includes about 600 acres of public land and provides one additional cable launch at BZ Corner and trails to some areas within the river area. This would provide additional opportunities for whitewater boaters and others to gain access to the river. Increased access for other recreationists such as hikers and anglers could result in increased conflict between different types of user groups.

ALTERNATIVE 4

This alternative includes about 200 acres of public land and boating access as in Alternative 3. Trails would be more limited than in Alternatives 3 and 5.

ALTERNATIVE 5

Alternative 5 includes about 500 acres of public land, and provides the most public access of all alternatives. Extensive trail development, as well as road access to a campground and two picnic areas could increase conflicts between different user groups. This alternative would provide the most access opportunities for various recreation activities, including off-road use of vehicles.

ALTERNATIVE 6

This alternative would have the greatest amount of land in federal ownership of any of the alternatives. The Forest Service, through agreement with SDS Lumber Company and the Washington State Department of Natural Resources would acquire all of the land within the boundary owned by SDS through a three-way land exchange (over 700 acres). This would bring an estimated 40% of the shoreline of the designated portion of the river into federal ownership. However, dispersed recreation use would not be encouraged on these lands, so not too many people would be likely to use them. The short interpretive trails would provide some access to these lands, but would not provide hikers or anglers direct access to the river.

The public would be provided access to the river at a launch site in BZ Corner, at the takeout at the head of Northwestern Lake, and at a couple of places in Husum, including a facility which provides some limited accessibility for people with restricted mobility. Information on access would be made available at the interpretive services facility.

OTHER RECREATION OPPORTUNITIES

Throughout the planning process, concerns were raised regarding other recreation opportunities. Some people want fishing access, interpretive sites, picnic areas, campgrounds, and hiking, bicycling, and horseback riding trails within the corridor. This section discusses potential impacts of additional recreation opportunities on recreation experiences within the Scenic River corridor.

ALTERNATIVE 1

It is difficult to ascertain what additional recreation opportunities would result if Alternative 1 was implemented. The Forest Service would not purchase land or easements, would not provide access or facilities, and would not monitor impacts of recreational use. Recreation opportunities could increase and benefit many; certain interest groups might control access and facilities; or unplanned, extensive recreation development could occur. Conflicts between different user groups could increase if additional recreation opportunities are provided under this alternative.

ALTERNATIVE 2

This alternative aims to enhance the natural character of the corridor. The only facility development would be for parking and sanitation at existing developed sites, and provision of public access at BZ Corner, Husum, and Northwestern Lake. While there would be limited development of recreation facilities, there would be additional opportunities for nature study and cross-country walking in a relatively undisturbed natural environment.

ALTERNATIVE 3

Alternative 3 allows additional recreational development: picnic areas at BZ Corner, Husum and Northwestern lake, a few short trails to specific points of interest, a bicycle trail along Highway 141 between Husum and BZ Corner, and a trail away from, but paralleling the river between BZ Corner and the National Forest property on the east side of the river. Some of these actions could result in increased conflict between user groups (hikers, anglers, boaters) and private landowners, and increased physical evidence of other users (litter, trampled vegetation, soil erosion). Monitoring, public education, and enforcement efforts could minimize these effects. Positive effects include a greater variety of recreation opportunities to meet the demands of recreationists. The trails would enable non-boating recreationists to learn about the natural values of the area. The bicycle trail would reduce the safety problems of the increasing numbers of bicyclists riding along Highway 141.

ALTERNATIVE 4

Two river-accessed picnic sites, and a few short trails to points of interest are provided. These actions would result in more developed recreation opportunities along the river than in Alternatives 1, 2, 3, and 6, but much less than in Alternative 5. Designated picnic/rest sites on the river may decrease impacts to resources by concentrating use in specific areas, and short trails may not increase conflicts between users as much as the trails proposed in Alternative 3 (more limited access for anglers, hikers). Opportunities for nature study, cultural resource interpretation, and long-distance hiking would not be available.

ALTERNATIVE 5

This alternative provides the largest number of recreation opportunities within the corridor. There is potential for development of interpretive sites, a campground that would be accessible from the road as well as the river, an extensive system of hiking trails, and opportunities for ORV use within the boundary, outside of the buffer area. While this alternative provides increased recreation opportunities, it may cause

displacement of recreationists desiring more solitude, less evidence of other recreationists, and a more natural-appearing environment. The trails would enable non-boating recreationists to learn about the natural values of the area.

Conflicts between user groups are likely to increase as opportunities and numbers of recreationists increase, due to the small size of the river corridor and the types of recreation use involved. Opportunities for motorized recreation, in particular, might result in conflicts with other user groups. In large public areas, various types of recreation use could be monitored and regulated through a variety of actions, including spatial and time distribution, and limiting use. In a small day-use area, it is unlikely that such measures would be feasible. It is more likely that careful consideration of facility design and opportunities to be provided would be the avenues for mitigating conflicts among users and impacts to river resources.

ALTERNATIVE 6

Compared with the other alternatives, Alternative 6 is moderate in the amount of recreation facilities it proposes - a few short interpretive loop trails, picnic sites and river viewpoints associated with the put-ins and take-outs at BZ Corner, Husum, and Northwestern Lake, two small river-accessed picnic sites located along the river, a bicycle trail along Highway 141, and an interpretive facility in Husum. These facilities would provide some, but not much, contact with the river by recreationists who are not boaters. The trails would allow people to experience the mixed oak communities and learn about their natural history. The interpretive facility would provide the opportunity to learn about the many features of the area including the story of prehistoric and historic use and habitation of the area. The bicycle path would reduce the safety problems of the increasing numbers of bicyclists riding along Highway 141. Since there is no campground proposed, people who desire to use a campground would have to travel outside the area, as they presently do, unless a private campground were developed outside the boundary.

One of the important differences between this alternative and the others is the high probability for the Forest Service to acquire most of the timbered land within the boundary. Although recreation use of these lands would not be encouraged and no facilities would be provided other than the trails mentioned above, some recreation use would undoubtedly take place on these lands. As long as there was not so much use that it caused conflicts with river recreation or adverse effects on biological communities, such use would be allowed to continue.

CUMULATIVE EFFECTS

There are regional and national recreation trends that will affect the demand for recreation use in the White Salmon River corridor. Nationally, there are increasing demands for whitewater recreation opportunities. The Columbia River Gorge National Scenic Area is attracting increased recreational use to the area and some of this use will likely "spill over" to the White Salmon River. The destination conference center called for by the National Scenic Area Act will be located in the Stevenson area, and could cause added interest in the White Salmon River corridor. Whitewater guides from outside the local area are discovering the White Salmon River, and there is likely to be increased interest to become established and to bring larger numbers of visitors to the river.

Several factors originating from outside the designated river corridor could affect the recreational experience of White Salmon River users. Water quality and quantity could be affected by activities outside the designated river corridor, and could influence the aesthetics of the water and the available flows for whitewater boating. Forest management activities outside of the corridor could affect the quality of views as seen from the river, although only in a few places. Air quality affects recreational experiences: the present quality is good, and it is expected to stay that way, at least for the foreseeable future. Outside noise could affect recreation experiences but this has not been a factor and is not expected to be one in the future.

MITIGATION

Recreation use levels will be monitored and managed by the Forest Service through authorities established by the Wild and Scenic Rivers Act. If use levels exceed those specified in the final management plan, river managers will implement measures to maintain acceptable levels. This monitoring and management program is referred to in the Limits of Acceptable Change section described in Chapter II. The probability of these measures being implemented and effective is high.

Ground disturbing effects of developed recreation facilities will be studied and mitigated through

environmental analyses performed prior to construction. There is a high probability that these measures will be effectively implemented.

Effects of recreation use will be monitored and if conflicts occur with other users or private landowners, or if resource damage occurs, actions will be taken to reduce those adverse effects, such as limits on use levels, closure of areas to use, etc. Because of the dispersed nature of these types of uses, and the reality of budget constraints, the effectiveness of these mitigation measures would be only moderate, even if conscientiously implemented.

EFFECTS ON LANDSCAPE CHARACTER

INTRODUCTION

Changes in a landscape's appearance occur either from human developments and activities or from natural processes. Other than catastrophic events, natural processes usually take a long time to make noticeable differences in the landscape character. However, in some cases they are fairly rapid, and processes such as revegetation are depended upon to soften the visual impacts of human activities.

In the absence of natural catastrophes, human developments and activities have the greatest potential for altering landscape character. Many of the activities are regulated differently in the alternatives, in part to vary the effects which would take place on the visual environment. Activities anticipated to occur in the White Salmon River corridor which may have significant effects on landscape character include timber harvest, agricultural activities (especially conversion from forest to croplands or pastures), residential or commercial development, road construction, recreation site development, and, to a much smaller degree, recreation uses which degrade vegetation.

The landscape character of an area may have a different appearance depending on the area from which the landscape is viewed. As indicated in Chapter III, this is the case with views from the river and from Highway 141. In addition, the overall character of the area is somewhat different from either of these specific land-based viewing areas. This section will describe effects from all three points of view.

This section will describe the anticipated effects on the landscape character of the White Salmon River *corridor*, an area approximately one mile wide ($\frac{1}{2}$ mile on each side of the river), which is considerably wider than the designated boundaries of any of the alternatives. This area is used, rather than just the area within the boundaries, in order to understand the total effects of the actions specified in each alternative,

because the controls which have direct effects on the environment within the boundary will also have indirect effects on the environment just outside the boundary. Therefore, in order to adequately compare the effects of the alternatives, it is necessary to look at a broader area than just what is included within the boundaries. This is especially true in this situation, in which each alternative has a different boundary.

A major assumption in this analysis is that the increasing popularity of the Columbia River Gorge, in general, and the Hood River/White Salmon/Bingen area in particular, will generate increasing demand for residential use of the White Salmon River valley, both for year-round housing and for the summer recreation season.

ALTERNATIVE 1

EFFECTS TO OVERALL LANDSCAPE CHARACTER

Under current land use controls, particularly the Resource Lands Zone and the Community Center Zone, substantial amounts of new residential and commercial development could occur (see Environmental Consequences to Land Uses). The greatest concentration of new buildings would be in the community centers of Husum and BZ Corner. Outside the community centers, the Resource Lands Zone requires that substantial amounts of land (75% to 95%) remain open for forestry or agriculture purposes. Therefore, in this area, buildings would be clustered on the most attractive building sites, probably near the river (100 to 200 feet back from the water), near Highway 141 or Oak Ridge Road, or on sites with good views. The new buildings, along with the roads and driveways that serve them, would create a significant change in landscape character.

If current trends continue, there would be a gradual shift from forest stands to agricultural fields and orchards. This would change the

present composition of the mosaic of fields and forests, bringing the percentage of fields closer to that of forests. It is not clear how the expected increase in residential development would affect this trend. If residences are constructed on forested land at the same rate as on agricultural land, there would be little effect on the relative proportions of each. Agricultural fields would still be located predominantly on the west side of the river, although there would be more located on the east side than currently exist.

Other than a 50-foot wide strip of land along each side of the river, no large blocks of vegetation would be left to develop naturally. Even within the 50-foot strip, 30% of the merchantable trees could be harvested once in the next 10 years. Due to the 30% limit on harvest within the 200-foot shorelines area, that area would have a fairly natural appearance. Clearcuts would be visible throughout the forested portions of the rest of the area. Although these would be very noticeable for a few years after they occurred, over the long run, they would contribute to the mosaic of the pastoral scenery.

There is a probability that some facilities, such as campgrounds or trailer parks, would be developed for recreation use. In addition, other commercial developments would probably locate within the area to serve new residents as well as recreationists.

In summary, it is likely that there would be a significant change in the overall appearance of the landscape. Forests and agricultural fields, while still comprising over half the area, would be less visually dominant, while the many new buildings and other developments would be a much more dominant part of the landscape. From an overall standpoint, there would not be any area large enough to have a truly natural appearance, although the portion of the 200' shorelines area which remained forested would have a fairly natural appearance.

VIEW FROM THE RIVER

Along portions of the river, particularly within the gorge in the upper two miles and other areas where the banks are steep, the appearance of

uncut, natural vegetation would remain. In the remainder of the area, the appearance of the vegetation within the first 50 feet of the river would be disrupted by a one-time timber harvest within the next ten years which would cause the stands to appear significantly thinner (30% of merchantable trees removed). This effect would be temporary, as revegetation would take place within a decade or so, after which the harvest would be unnoticeable to the average visitor. Behind the 50-foot zone, out to 200 feet, where a 30% harvest could occur every 10 years, the thinning effect of such a harvest may not be noticeable to viewers on the river, except while the new trees within the first 50 feet are still small. Clearcuts beyond the 200-foot zone could be noticeable from the river, but in most cases would not create dominant effects.

It is not known what type of recreation facilities might be provided in this alternative. However, it is assumed that as demand increases, some facilities, such as picnic areas, trails, etc., would be constructed along the banks of the river. Unlimited boating use would probably result in detractions to the scenery along the river banks in the form of more litter, and there would be more areas where vegetation has been damaged and soil exposed.

In places, agricultural clearings or orchards would be visible behind the 50-foot zone of natural vegetation. In addition, new structures such as spring boxes, water pipes, and bridges would be built within the stream or along the water's edge. These structures would be visible from the river and would reduce the natural appearance of the riverbanks.

There would be a marked increase in the number of buildings visible from the river in areas where the banks are not steep. Although buildings would be set back 100 feet from the edge of the river (as required by the county Shoreline Master Plan), in many places this would still allow the buildings to be seen. Due to the frontage requirement of 660 feet in the area outside of Husum, up to eight houses per mile could be seen on each side of the river, for a total of about 50 houses. Along the half mile or so of river within the community of Husum, the setback

is 50 feet and the frontage requirement is 104 feet; thus, another 50 or so buildings could be visible in this area. In addition, there are a few places with gentle slopes adjacent to the river where high density development (eight residences per acre) outside the 200-foot Shoreline Management Zone could be visible from the river. Development in BZ Corner would not be visible from the river due to the steep cliffs adjacent to the river.

VIEW FROM HIGHWAY 141 FROM HUSUM NORTH

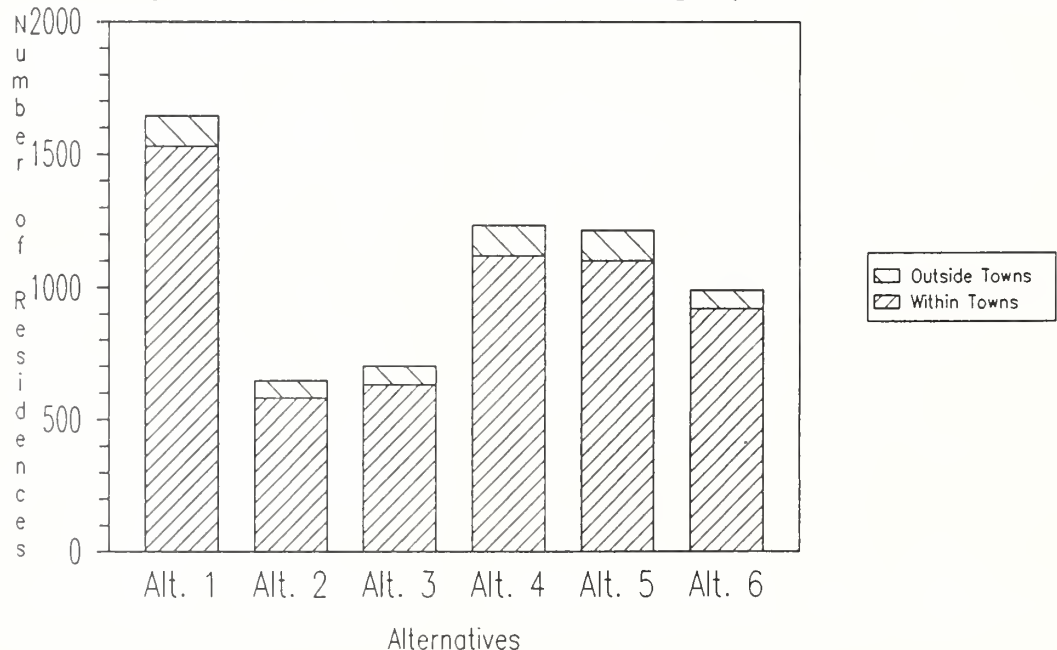
As with the area adjacent to the White Salmon River, the area along Highway 141 is potentially desirable for the location of residences. The Resource Lands Zone applies outside the rural centers of Husum and BZ Corner. If it is assumed that the zoning restrictions would result in an average density of one house per 15 acres. This would allow about 124 houses to be located in this area if the land would be subdivided once, and about 235 houses if the remaining land would be subdivided again. Assuming that half of those would locate as close to the river as possible, or in other places which were not visible from the highway, this would mean that, in less

than 10 years, about 115 residences could be located where they would be visible from Highway 141 outside the communities of Husum and BZ Corner.

If it is assumed that 60% of the rural center acreage of BZ Corner and 35% of the rural center acreage of Husum are visible from Highway 141, and that those communities are developed to their maximum allowable densities, there could be over 1,500 residences and commercial buildings visible from the highway in those two communities.

Timber harvest activities which would take place under state forest practices regulations, particularly clearcuts, would be very noticeable for a few years after they occurred, but over the long run would play an important part in maintaining the mosaic of the pastoral scenery. However, even though approximately 80% of the land seen from Highway 141 would be kept open for agricultural or forestry uses, this number of buildings in this area would cause a significant change in appearance. See Figure IV-2, for a comparison of the number of potential residences seen from Highway 141.

Figure IV-2: Potential Residences Visible From Highway 141.



ALTERNATIVE 2

EFFECTS TO OVERALL LANDSCAPE CHARACTER

This alternative includes a wild and scenic river boundary which is an average of ½ mile wide, within which the goal is to increase the natural character of the area. This would provide the most natural appearing landscape within the boundaries and the greatest degree of future options for managing the landscape, of any alternative. There would be a relatively wide buffer along the river (400 feet on each side) which would be increasingly natural appearing forest. There would be other significant blocks of land set aside for enhancement of wildlife habitat and biodiversity which would also increase the natural appearance.

There would still be many acres of agricultural lands, but their proportion of the total landscape within the corridor could drop to 25% or less from the existing level of about 35%. This would be due to the phaseout of agriculture within the buffer and the conversion of up to 50% of agricultural lands to forestry, and to pressure for residential development, most of which would be directed at lands within the corridor but outside the boundary.

Within the boundary, forestry would still take place on the relatively small amount of land available for timber harvest. Due to the requirement to use uneven-aged silvicultural systems, fresh clearcuts would no longer be visible.

As a result of the prohibition on new residences and the elimination of some existing ones, residential structures within the boundary would be less visually prominent than they currently are. However, due to the restrictions on new development within the boundary, much of the pressure which would normally be directed at this area would be shifted to lands within the corridor, but just outside the boundary. This would result in a greater prominence of buildings in this area, particularly along the west side of Highway 141 and the portions of the rural centers which would be outside the boundaries.

VIEW FROM THE RIVER

The 400-foot buffer on each side of the river is very restrictive in terms of prohibiting new activities or developments and eliminating existing ones that adversely affect the area. As a result, few structures or activities, including instream structures, would be visible from the river. Also, there would be the least amount of boating use along the river in this alternative; so there would be little detracting from the natural character of the river banks from things such as litter, damaged vegetation and exposed soil. This would make this area quite natural appearing for almost the entire length of the river, more natural appearing than at present, and the most natural appearing of any alternative.

In the community of Husum, where the two bridges, the highway, and some of the existing buildings would still be visible, there would be a small, localized area where the appearance is of moderate development, rather than natural appearing.

VIEW FROM HIGHWAY 141 FROM HUSUM NORTH

In this alternative, the boundary of the Scenic River north of Husum is along the west shoulder of Highway 141. Other than in the rural centers, no new residences are allowed to be built within the boundary, and some of the existing ones may be acquired. Therefore, the desire to build new residences in the river valley would have to be met on the west side of the highway, outside of the boundary. Assuming that Klickitat County would enforce the Resource Lands Zone, but that people would be more creative in figuring out how to develop near the highway, there could be up to about 65 houses visible from Highway 141 in a period of less than 10 years. This is a little more than half of what could be visible in Alternative 1, but in this alternative, they would all be located on the west side of the highway.

Because the 400-foot buffer prohibits construction of new residences, the total number of residences which could be built in Husum and BZ Corner and would be visible from Highway 141, would

be about 580 if this area were to be developed to its maximum density. See Figure IV-2 for a comparison of the number of potential residences visible from Highway 141.

The ratio of forest and farmland visible from Highway 141 on the east side of the highway would likely be little changed even though 50% of the farmland within the boundaries could be converted to forest. This is because the remaining farmland would be concentrated along the highway.

ALTERNATIVE 3

EFFECTS TO OVERALL LANDSCAPE CHARACTER

The overall effects to landscape character in this alternative are similar to those in Alternative 2. However, since the boundaries are only 75% as wide, a smaller area would be affected by the restrictions in the management plan.

The goal is to maintain the current river character; so the portions of the landscape with a natural appearance would be significantly smaller in this alternative than in Alternative 2. One of the major areas affected by this is the buffer, where the strip of natural appearing vegetation along the river would be only half as wide (200 feet on each side of the river), and existing agricultural uses within this buffer would be allowed to remain. In addition fewer lands would take on a natural appearance as fewer lands would be set aside for biodiversity.

Agricultural uses would remain at about the same level as at present. This would allow retention of the current, highly valued, rural/pastoral landscape character.

Forestry practices would be allowed, but modified in selected oak stands to perpetuate oak trees while producing commercial crops of conifers. This would result in an appearance of scattered trees or sparse forest on these lands for a decade or two after the harvest of the conifers. On lands viewed from the river, Highway 141, or

the rural centers, the forested areas would continue to appear forested, even where timber harvest was allowed. In other places where timber harvest was still allowed, current practices would continue and clearcuts would be visible in many parts of the area within and outside the boundary.

The area within the boundary, but outside the buffer and the rural centers, would receive very light additional residential development, while the rural centers could add 50% more than they currently have. Overall, this would create a slightly greater prominence of buildings than currently exists within the boundary. As in Alternative 2, the demand for housing which could not be met within the boundary would probably take place just outside the boundary, particularly along the west side of Highway 141 and within the rural centers, thus increasing the visual prominence of buildings in these areas.

VIEW FROM THE RIVER

The 200-foot buffer in this alternative is not as restrictive as in Alternative 2. It would prevent most new development and timber harvest, but would allow existing agriculture and buildings to stay. The 200-foot depth would screen out almost all new development behind it, and those new developments that would otherwise be visible would be mitigated by blending materials, colors, etc., to make them less visible. The visibility of existing structures which currently can be seen from the river would be reduced through screening, color changes, etc. However, some of the historic structures in or immediately adjacent to the river which are being interpreted would still be visible. Boating use in this alternative would still be light enough to cause little effect on the view of the river banks. In this alternative, the view from the river should continue to be about as natural as it is currently, or even slightly more natural.

VIEW FROM HIGHWAY 141 FROM HUSUM NORTH

Alternative 3 has the same western boundary in this area as Alternative 2 (along the west shoulder of Highway 141). Therefore, on the west side of the highway, the effects would be the same as in

Alternative 2. In the area within the boundary, but outside the rural centers, new residences could be built at an average density of one per 40 acres, but they would have to be clustered, and could not be very visible from the highway. Because of this, the visibility of buildings in this area would be just a little greater than in Alternative 2.

In the rural centers, the visible acreage which could be developed is a little greater than in Alternative 2 because the buffer is only 200 feet rather than 400 feet. This additional land is all within the boundary; so the density would not be as high as if it were outside the boundary. A total of about 630 buildings could be visible from the highway in the rural centers. See Figure IV-2 for a comparison of the residences which could potentially be visible from Highway 141.

East of Highway 141, the pastoral scenery that presently exists would remain essentially the same, except that a few more houses would be partially visible. Timber harvest activities in this area would be designed so that they maintain a forested appearance at all times.

ALTERNATIVE 4

EFFECTS TO OVERALL LANDSCAPE CHARACTER

This alternative has the narrowest boundary of any, with an average width of about 335 feet from the river on each side. There would be little, if any, area which is natural appearing, since the 100-foot buffer on each side of the river is too narrow and linear to give that appearance.

With such a narrow boundary, the fact that some forested land within the boundary would be allowed to convert to agricultural uses, and the fact that little in the way of restrictions would be placed on forest practices, the effect on overall landscape character within the corridor as a whole would be fairly similar to what would occur in Alternative 1.

VIEW FROM THE RIVER

The 100-foot buffer in this alternative would provide some screening of new and existing developments and activities, but many would be visible. Timber harvest in the area between the 100-foot buffer and the boundary of the Shoreline Management Zone (200 feet) would be a 30% harvest every 10 years and, in most cases, would not be very noticeable.

Some new instream structures would be allowed, and even though done carefully, would probably be somewhat visible. In addition, two picnic area/rest stops would be developed for boater use and parts of these facilities would be visible. Boating use might be high enough that some damage to the river banks in the form of litter, soil compaction, etc., would be noticeable.

A total of about 26 buildings could be located just outside the buffer where they might be visible. However, the use of compatible materials and colors would make them less noticeable. Since the buildings would be clustered, there would still be large areas along the river where houses could not be seen.

In Husum, there would be some small areas visible beyond the 100-foot buffer which, at a density of two to four buildings per acre, would have a highly developed appearance.

VIEW FROM HIGHWAY 141 FROM HUSUM NORTH

In Alternative 4, the boundary is very narrow - between 200 feet and 400 feet from the river. In the area between Husum and BZ Corner, almost all the land seen from Highway 141 is outside the boundary and would be subject to the standards in the Resource Lands Zone. Therefore, the effects on landscape character in this area would be essentially the same as in Alternative 1.

In the rural centers, due to narrower boundaries and a narrower buffer than in Alternative 3, substantially more buildings, up to about 1,120 residences, would be visible from the highway. This is about $\frac{3}{4}$ of the residences which could be

visible in the rural centers in Alternative 1, so the overall effects of this alternative on the view from Highway 141 would be fairly similar to the effects in Alternative 1. See Figure IV-2 for a comparison of the number of potential residences which could be seen from Highway 141.

ALTERNATIVE 5

EFFECTS TO OVERALL LANDSCAPE CHARACTER

The effects of this alternative on overall landscape character are very similar to those of Alternative 4. One difference is that the wider boundaries in selected places would provide land for a number of recreation developments. This provides some areas which may be large enough to present a fairly natural appearance - the area between the old Hendrix Homestead (RM 9.6) and BZ Corner, on the east side of the river, and the area from Spring Creek to Buck Creek, on the west side of the river.

VIEW FROM THE RIVER

The variable buffer of 50-100 feet in this alternative would provide considerable screening of new and existing developments and activities, but many would be visible. Timber harvest in the area between the buffer and the boundary of the Shoreline Management Zone (200 feet) would be a 30% harvest every 10 years and, as in Alternative 4, in most cases would not be very noticeable.

As in Alternative 4, some new instream structures would be allowed, and even though done carefully, would probably be somewhat visible. The two picnic area/rest stops would be included in this alternative. Since they would be accessible to motorists from the road, they would probably be larger, more highly developed, and more visible. An additional cable launch in BZ Corner and expanded take-out facilities at Northwestern Lake would be developed. The visual effects of

the increased recreation facilities would be to reduce the natural appearance of the area and give it a more developed character. Boating use and use on the riverside trails would probably be high enough that damage to the river banks in the form of litter, soil compaction, etc. would be noticeable.

Outside of Husum, there could be a total of about 26 residences located just outside the buffer which might be visible. However, the use of compatible materials and colors would make them less noticeable. Since each building would be located on a lot with ¼ mile frontage, the visual impression would be of sparse settlement along the river with plenty of space between the houses.

In Husum, there would be quite a bit of area visible beyond the 50-foot buffer which, at a density of two to four buildings per acre, would have a highly developed appearance. However, due to the presence of a large picnic area, the section in the vicinity of the old wood bridge would be much more natural appearing.

VIEW FROM HIGHWAY 141 FROM HUSUM NORTH

Although the boundaries are wider in places in Alternative 5 than they are in Alternative 4, they are not wider in most of the areas seen from Highway 141. Because of this, the landscape seen from the highway between Husum and BZ Corner would be essentially the same as in Alternatives 1 and 4.

In the rural centers there could be ten more buildings seen in BZ Corner in this alternative than in Alternative 4, and 31 less in Husum; so the difference between the two alternatives is only 21 residences. This difference would not be noticeable, so the effects on landscape character of the rural centers in Alternative 5 would be essentially the same as the effects in Alternative 4. See Figure IV-2 for a comparison of the number of potential residences which could be seen from Highway 141.

ALTERNATIVE 6

EFFECTS TO OVERALL LANDSCAPE CHARACTER

In some ways Alternative 6 is similar to Alternative 3. The boundaries would be almost exactly the same, and, outside the rural centers, the buffer would be the same width - 200 feet.

The major difference between the two alternatives is that in Alternative 6, SDS Lumber Company has agreed to trade all the land it presently owns within the boundaries to the Forest Service. This amounts to over 700 acres in six relatively large blocks. In combination with the land in the buffer and other lands which would come into federal ownership, there would probably be over 1,200 acres for which maintaining and enhancing biological diversity would be the main purpose. There would be no timber harvest on these lands unless needed to maintain biological diversity. This would assure that the current acreage of forest land is essentially maintained. Because timber harvest would be excluded from all these acres, approximately half the land within the boundary would retain or develop into a natural appearance.

The remaining stands of timber within the boundary are almost all relatively small and scattered. These would be managed under current state and county regulations. Even if clearcut, most would be adjacent to existing fields and would not be visually dominant. Outside the boundary, timber practices would be conducted as they currently are and clearcuts would be noticeable in many parts of the area. However, over the long run, they would play an important part in maintaining the mosaic of the pastoral scenery.

Due to restrictions on the density of new housing and requirements to maintain 95% of the land outside the rural centers that are undeveloped and available for forestry or agriculture, the current, highly valued, rural-pastoral landscape character would be retained.

Within the boundary, housing development outside the rural centers could be about double what it would be in Alternative 3, while housing within the rural centers could be five times as great as Alternative 3. This would create a greater prominence of buildings than currently exists within the boundary, particularly within the rural centers. Outside the boundaries, the appearance of housing development would be the same as Alternative 3.

VIEW FROM THE RIVER

The visual effects of the 200 foot buffer in this alternative would be similar to Alternative 3 except in Husum, where the buffer is only 100 feet wide. In Husum, there would be some small areas visible beyond the 100-foot buffer which, at a density of four buildings per acre, would have a highly developed appearance.

Some new instream structures would be allowed, and even though done carefully, would probably be somewhat visible. Existing instream structures would be treated to reduce visibility, except the historic structures which are being interpreted would still be visible. In addition, two picnic area/rest stops would be developed for boater use and parts of these facilities would be visible. Boating use might be high enough that minor effects on the river banks in the form of litter, soil compaction, etc. might be noticeable.

VIEW FROM HIGHWAY 141 FROM HUSUM NORTH

On the west side of Highway 141, outside the boundary, the effects would be essentially the same as in Alternative 1. On the east side of the highway, inside the boundary, housing could be twice as dense as Alternative 3 and there would be no restriction to prevent development from being visible from Highway 141. For these reasons, the visibility of buildings would be somewhat greater than in Alternatives 2 and 3, but nowhere near as high as in Alternatives 1, 4, and 5. Timber harvest activities which would take place under state forest practices regulations, would only occur on a small amount of land visible from Highway 141. They would not be very noticeable and, over the long run, would

play an important part in maintaining the mosaic of the pastoral scenery. The rural character of the landscape would still be predominant on both sides of the highway, but especially on the east side.

In the rural centers, Alternative 6 has higher densities than all the other alternatives except Alternative 1, but special efforts would be made to keep the area in Husum along both sides of the river from being overdeveloped. This would substantially reduce the number of houses seen on the east side of the river between the river and the Highway, and on the west side of the river. In BZ Corner, more houses would be visible than in Alternative 3, but less than in Alternatives 1, 4, and 5.

CUMULATIVE EFFECTS

Cumulative effects on landscape character are the aggregate changes to the existing landscape, both inside and outside the potential boundaries, which are likely to occur as a result of all actions which cause change. Actions which have the potential to cause change can either be a result of this proposal or they can be generated by forces outside the control of the proposal. In this case, the area under consideration is quite small and narrow, and is surrounded by lands over which the Forest Service has no authority or control. The primary uses of those lands outside the boundary, timber management, agriculture, and residential development, typically cause substantial changes in the landscape character of the area. On the other hand, one of the major goals of a wild and scenic river is to protect the scenery of the river and the area through which it flows.

The landscape outside the boundaries will continue to change as it has in the past, with more and more of the area being converted to agricultural and residential uses. Over time, the overall landscape would appear less natural and more developed. The area within the boundaries would not follow that trend, but instead would be an area where the change is reduced or even reversed - where a more natural appearance

would be maintained or recreated. The effects of this proposal would therefore be to diminish the normal cumulative effects on the landscape (in varying degrees, depending on the alternative), but in an area which is a relatively small island. This effect would be strongest in Alternatives 2 and 3, and weakest in Alternative 1, with Alternatives 4, 5, and 6 being intermediate.

One force operating outside the bounds of this proposal is the consideration of whether to include the upper White Salmon River in the National Wild and Scenic River System. If that were to happen, or if some other management strategy whose goal was to protect and maintain the scenery were to be adopted, the size of the island would be much larger, and the cumulative effect would be a significant area of relatively natural appearing landscape character.

MITIGATION MEASURES

Many of the measures included in the management direction of the alternatives will mitigate effects on the landscape character of the area within the wild and scenic river boundaries. Such things as wider boundaries and limiting timber harvest, road and bridge construction, residential and commercial development, etc. will all have the effect of reducing incongruous visual elements in the area. Specific requirements such as meeting certain visual quality objectives, using blending colors and materials, and providing vegetative screening, will also serve to mitigate the visual results of future development. The probability of these measures being implemented and effective is very high.

Not all potential development within the whole area under consideration is within the authority of the Wild and Scenic Rivers Act. This is particularly true of the area outside the boundaries. For this reason, Alternatives 2-5 include recommendations to Klickitat County to strengthen the Resource Lands Zone and reduce the size of the area in the Rural Center Zone. If this were to be done, it would allow much more of the land to remain open for forestry or agriculture, and would result in far fewer new residences

being constructed and visible. The effect of this would be that the rural landscape would be fairly well maintained. The county is in the process of revising its comprehensive plan for this area. There has been an indication that they would consider looking at some changes which would provide greater protection for the White Salmon River valley, but probably not to the extent called for in the alternatives. Therefore

the probability of these mitigation measures being implemented is fairly low.

See Figure IV-7 in the Effects On Land Uses section in this Chapter for a display of the number of residences which could be built if the County followed the recommendations for strengthening the Resource Lands Zone and reducing the size and density of the rural centers.

EFFECTS ON LAND USES

INTRODUCTION

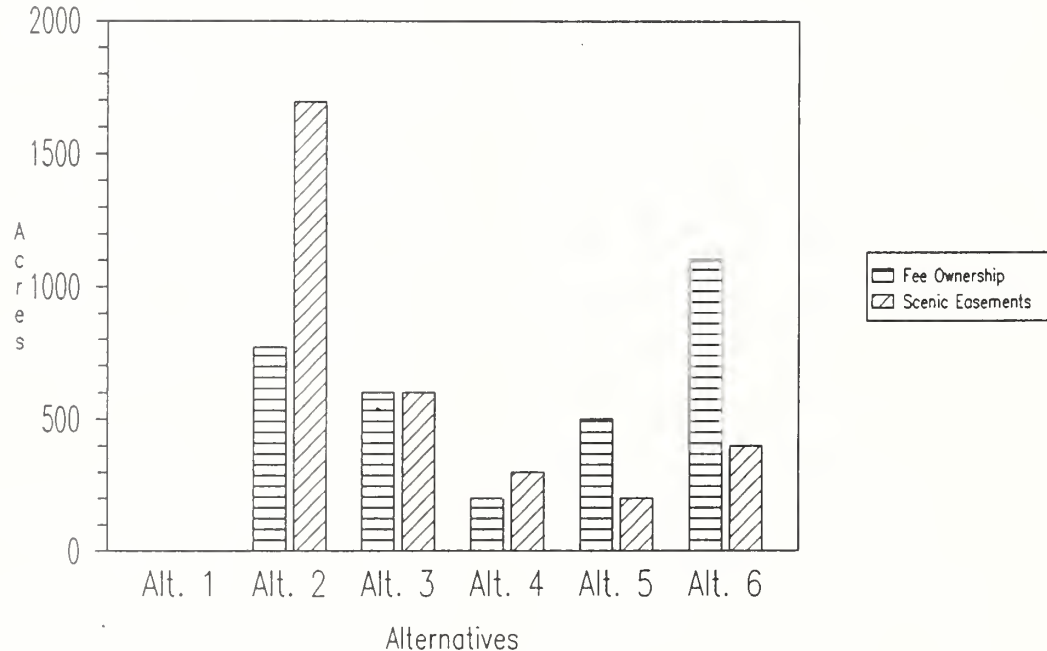
The management alternatives presented in this document would have direct and indirect effects (which could be either long- or short-term) on the various private land uses within the river boundary. There would also be some effects to properties adjacent to the river boundary. The land uses involved are forestry, agriculture and grazing, and residential and commercial development.

It is important to emphasize that the federal government does not have the authority to zone private land. Therefore, provisions causing the following effects could only be accomplished by the acquisition in fee title or scenic easements

by the federal government. There are limits on the federal government's authority to acquire lands and interest and any acquisition is contingent upon appropriations from congress.

It is important to note that the policy of the Forest Service regarding acquisition of private property to meet wild and scenic river goals, is to acquire lands, or interest in lands, from willing sellers. The Forest Service does have condemnation authority, but has never used it to acquire property in fee title. It has used condemnation to acquire scenic easements, but very sparingly, and then only when serious threats to Wild and Scenic River values could not be resolved with other measures. The Forest Service has not used condemnation authority to acquire scenic easements for over ten years.

Figure IV-3: Amount of Federal Ownership



LAND OWNERSHIP

Alternatives 2 through 6 would significantly change the land ownership pattern in the White Salmon River corridor between Northwestern Lake and Gilmer Creek. These changes would result from the purchase by the federal government of properties in fee title or by scenic easements where only certain rights are acquired. The approximate number of acres that would be acquired in fee and by scenic easement is displayed in Figure IV-3. Alternative 6 would have the greatest level of federal ownership in fee title while Alternative 4 would have the least. While Alternative 6 would result in a large number of acres within the river corridor becoming National Forest lands, much of this is from the large exchange with SDS Lumber Company. SDS Lumber Company would still maintain its land base, but it would be in different parts of the county. There would be no federal acquisition in Alternative 1.

FORESTRY

ALTERNATIVE 1

Alternative 1 would have the least effect on forest management, but some lands would be taken out of timber production for various reasons (see Figure IV-4 for a comparison of the restrictions on timber harvest between the alternatives). Current activities would continue and conform to the Washington State Forest Practices Act and the Klickitat County Shoreline Master Plan. Within the 200-foot shoreline area, many landowners would harvest 30 percent of merchantable timber during the next ten years. In the area outside of the 200-foot shoreline area, a variety of activities would occur in the commercial forests, including clearcuts and commercial thinnings. The primary use of most forested land in the White Salmon River valley would be to produce trees for commercial purposes. Some landowners with smaller properties would choose not to cut their trees. Some land would be taken

out of timber production due to residential development and conversion to agriculture. The amount would depend on land values and the demand for residential development. It is anticipated that there would be strong pressure for residential development. Also, because of increased public concerns, the State of Washington may pass more restrictive provisions in the Forest Practices Act, which would result in less intensive management practices.

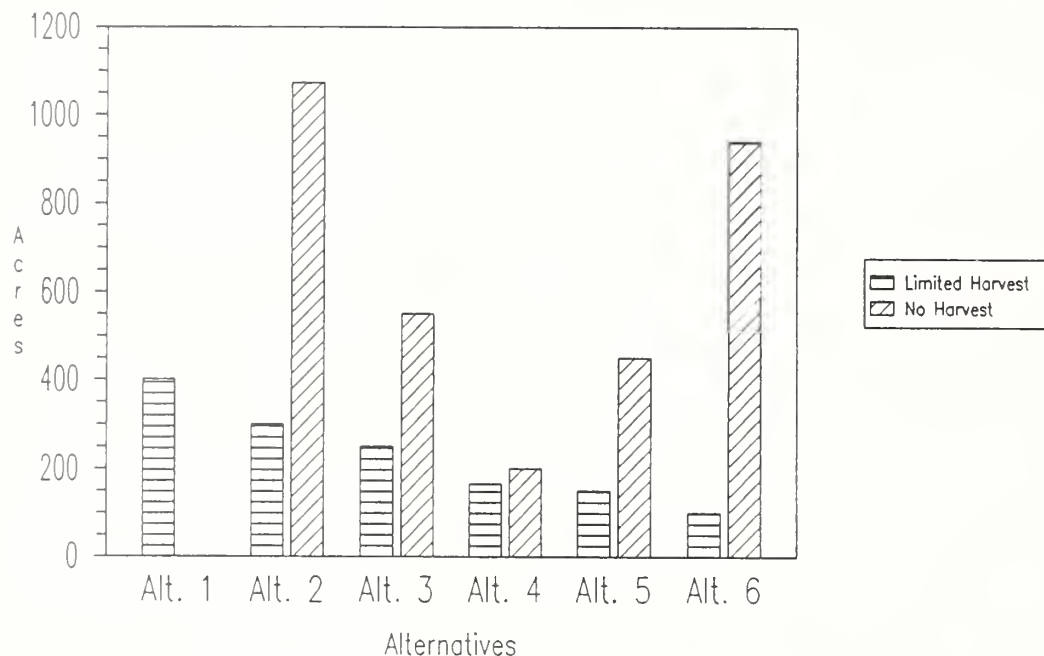
ALTERNATIVE 2

Alternative 2 contains 2,214 acres in the river boundary, and 1,373 acres (62 percent) are forested. The goal of this alternative is to increase naturalness, and there would be no timber harvest within a 400-foot zone from the river's edge. This buffer would remove nearly 550 acres from the timber management lands. Timber management activities in much of the remaining river boundary would be severely restricted to protect and enhance wildlife, Oregon white oak, old growth and scenery. Timber harvest could occur on only about 300 acres and selective cutting methods would be required. This alternative would have the greatest reduction of timber harvest.

ALTERNATIVE 3

Alternative 3 contains 1,819 acres within the river boundary and approximately 1,000 acres (57 percent) is forested. No commercial harvest of trees would occur in a 200-foot buffer zone on each side of the river, accounting for approximately 350 acres of forest land. Most of the remaining 650 acres of forest land would be impacted by some restrictions to accomplish visual, wildlife and vegetative objectives. The effects on commercial timber harvest would be less than Alternative 2, because much less land would be withdrawn from timber harvest, clearcutting could be used as a management tool, and some timber stands that would be managed to perpetuate oak, would be able to grow conifer trees as well.

Figure IV-4: Area on Which Timber Harvest is Restricted



Note: In Alt. 1, after 10 years, 100 acres shifts from Limited Harvest to No Harvest

ALTERNATIVE 4

Alternative 4 has a very narrow boundary and only 366 acres within it are forested. The 100-foot buffer on both sides of the river would remove approximately 200 acres from the timber base. Timber harvest could occur on the remaining acres with some restrictions for visual purposes. Because of the small number of acres involved, this alternative has the least effect on timber management activities with the exception of Alternative 1.

ALTERNATIVE 5

Alternative 5 includes 826 acres of forested land within the river boundary and has a buffer area that varies from 50 to 150 feet. This buffer removes about 150 acres from potential timber harvest purposes. The remainder of the area could be managed for timber with light to moderate restraints for the protection of trails and scenery. The impacts from this alternative

are similar but slightly greater than Alternative 4 because of the larger area involved.

ALTERNATIVE 6

There are approximately 1,040 acres of forest land that would have some form of timber harvest restrictions in this alternative. This would occur primarily within the 200-foot buffer zone on each side of the river and on the lands acquired from SDS Lumber Company. The timber lands within the buffer zone already have some limited restrictions from the State Shorelines Management Plan and the Forest Practices Act. Some very limited form of harvest could occur on the acquired federal lands if future studies show such activity would be necessary for biodiversity purposes or to benefit Oregon white oaks.

CUMULATIVE EFFECTS

The alternatives in this document display varying levels of timber harvest to accomplish different Wild and Scenic River goals and objectives.

Timber harvest opportunities will also be affected by other factors occurring outside of the river corridor. Cumulative effects in this section relate to pressures or incentives of private landowners within the river corridor to harvest their trees for commercial purposes. This is affected by the demand for forest products and the supply available from other sources.

The regional supply of timber will likely be curtailed in the near future because of national forest management plans that show sharply reduced annual allowable harvest levels and by efforts to protect the spotted owl. This, coupled with the high prices being paid for logs on the foreign market, will cause some private landowners with forest land to consider harvesting their merchantable trees.

An additional factor that may impact private timber harvest activity in the corridor is the increased public interest in timber harvest in the rural-urban interface. This pressure could lead to further restrictions on the harvest of privately owned timber by the Washington Department of Natural Resources. The state has already recognized the oregon white oak community as a "critical wildlife community" deserving special management consideration.

MITIGATION

For those areas on private land where the management plan calls for restricting or eliminating timber harvest to meet Wild and Scenic River objectives, the Forest Service will try to acquire scenic easements. Fair market value will be paid to the owner for any right included in the scenic easement. The likelihood of this occurring is largely dependent on available funds which is difficult to predict from year to year. However, because of the intense interest in the river, it is felt there is a good chance that Congress will make money available for this purpose but it will take several years to accomplish everything.

AGRICULTURE

ALTERNATIVE 1

In Alternative 1, farming, orchards, and cattle grazing would continue to be regulated under existing state and county laws. There would be some reduction in the amount of land used for agricultural purposes due to residential development. This would be offset by the conversion of some forest land to agriculture. The overall effect would be a slight reduction in agricultural activities in the long term. It is likely that some acres would be converted from crop production to small "hobby farms," providing pasture for small numbers of cattle and horses. Over the long term, it is likely that commercial agricultural uses would decrease in the valley.

ALTERNATIVE 2

Under Alternative 2 there would be significant impacts to agricultural practices. There are 400 acres of pasture and hay fields and 94 acres of orchards within this river boundary. All agricultural uses would be eliminated within a 400-foot zone on each side of the river. In portions of the remaining area, grazing of animals would be subject to grazing plans to help accomplish vegetative objectives. While there is only a small amount of grazing occurring now, it is expected that this use would not be economical and would cease. Nearly one-half of the existing orchards would be eliminated, as they would be within the buffer. Up to 50 percent of the existing fields used for alfalfa or grain production would be converted to forests. This alternative would have the greatest impact on agricultural uses.

ALTERNATIVE 3

Boundaries for Alternative 3 contain 385 acres of pasture and hay fields and 83 acres of orchard. Impacts to existing agricultural activities would be very small. Existing uses could continue, but new uses within the 200-foot buffer zone would not be permitted. The intent would be to keep existing agricultural activities generally as they are. There would be a negative impact to grazing activities. Grazing would not be permitted within

a 200-foot buffer zone on each side of the river and a grazing plan would be required in the remainder of the area. As in Alternative 2, it is expected that some grazing activities would be phased out because animals could not be watered in the river.

ALTERNATIVE 4

Impacts to agricultural use, except for grazing, are minimal in Alternative 4. Because of the narrow boundary, only 10 acres of orchard land and 68 acres of cropland are affected. Grazing would be eliminated in a 100-foot zone on each side of the river, and grazing plans required only in riparian and wetland areas. This may require fencing and alternative water sources, increasing the likelihood that some grazing would be phased out. Orchard and other crop production activities could continue. Some additional areas outside the 100-foot buffer zone could be converted to agriculture.

ALTERNATIVE 5

The effects to agricultural practices in Alternative 5 are similar in nature to those for Alternative 4. None of the land needed for recreation development would displace any existing agriculture uses. Other existing uses could continue and some timbered areas could be converted for agricultural purposes.

ALTERNATIVE 6

Impacts to agricultural use, except for grazing, would be minimal in this alternative. Grazing would be allowed on the nearly 700 acres of acquired federal lands which are open for that use now. However, there is only minor grazing occurring there now and most of this land is heavily forested and not considered to be highly suited for the activity. Grazing could occur on the remainder of the river corridor subject to existing county and state regulations. The effects to other farm and orchard activities would be similar to Alternative 3.

CUMULATIVE EFFECTS

Agriculture uses in the river corridor would be primarily affected by local and regional market conditions and conversion of land to residential uses. It is expected that pressures to convert agriculture land to residential purposes would increase dramatically in the next ten years. As land values increase, and the number of people looking for a desirable place to live grows, there would be a tendency on the part of landowners to sell their land. Properties once used for commercial agriculture purposes could be converted for residential or commercial purposes.

MITIGATION

This document displays an array of alternatives with varying effects on agriculture. Depending on the alternative selected for the management plan, the Forest Service would either encourage Klickitat County to help maintain the present level of agriculture uses through its zoning ordinances, or purchase scenic easements to meet management plan objectives. Landowners would be compensated at the fair market value for any right purchased by the federal government. The likelihood of this occurring is dependent upon funding from Congress and it is felt there is a high probability of this happening, but it would likely take several years to accomplish.

RESIDENTIAL AND COMMERCIAL

All alternatives considered in this document except Alternative 1 will have an effect on the amount and type of residential and commercial development occurring in the lower White Salmon River valley in the future. The level of development would vary considerably and would have indirect effects on other resources and on the rate of development outside the river boundary. This section considers only how the amount of development within the proposed boundaries would be affected. Other sections consider how development affects other resources. This analysis assumes there will be strong interest and pressure to develop available land for residential and commercial purposes.

Figure IV-5: Potential Residences Within 200' of the River

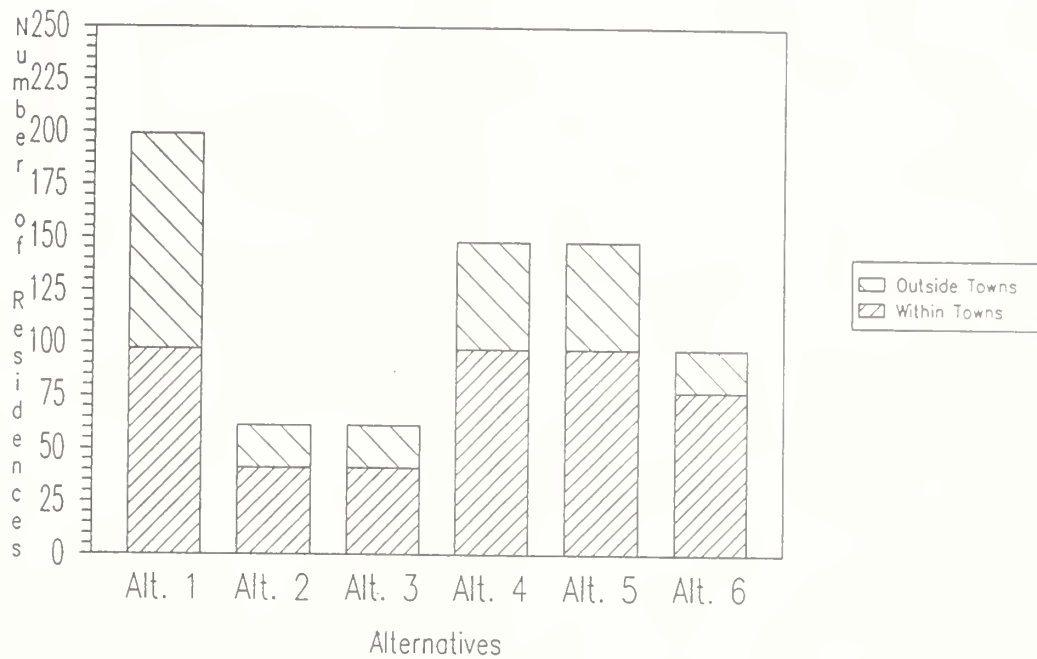
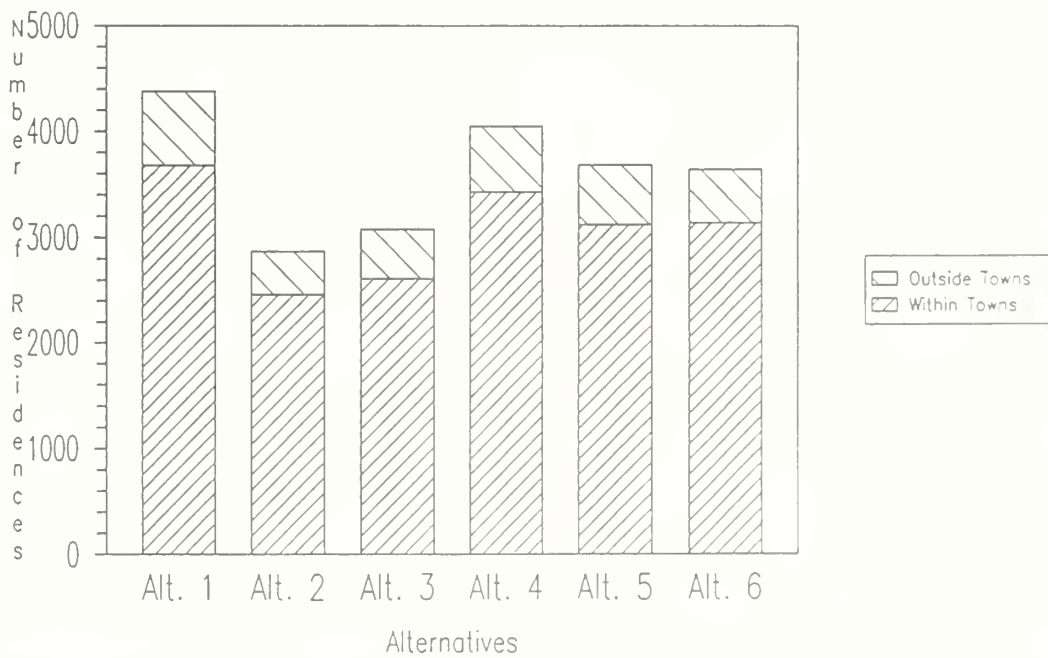


Figure IV-6: Potential Residences Within a 1-Mile Wide Corridor



ALTERNATIVE 1

In Alternative 1, the county would regulate land use and development under its existing authorities. The county has recently updated the Shoreline Master Plan and is in the process of updating its comprehensive plan. Changes in the zoning ordinances will be made after the comprehensive plan is completed. These estimated effects are based on the existing zoning ordinances and the updated Shoreline Master Plan.

This analysis considers an area one-half mile on each side of the river and is broken into the zone covered by the Shoreline Master Plan (200 feet on each side of the river), and the remaining upslope area. Under the provisions of the Shoreline Master Plan, an additional 102 residential dwellings could be built in the shoreline zone outside the communities of Husum and BZ Corner and the Northwestern Lake complex. Additionally, up to 42 residential units in Husum and 55 in BZ Corner could be added (Fig. IV-5). Commercial development would be prohibited in the zone outside of the Husum and BZ Corner rural centers.

The level of development in the upslope area outside of the shoreline zone and excluding Husum and BZ Corner is difficult to estimate as it depends on the suitability of agricultural and forest land considered. If it is assumed that all of this area would be considered highly suitable for agricultural or forestry uses, there would be a requirement of a minimum of 20 acres per residential dwelling. At this level, a total of 225 dwellings could exist in this upslope area between Gilmer Creek and Northwestern Lake. It is likely that some of the upslope land would not be highly suited for agriculture or forestry and could be developed at a higher density.

Additionally, the upslope portions of Husum and BZ Corner could be further developed. The existing county zone would permit a density of up to 8.7 dwelling units per acre if community sewer and water systems are provided. While there are no plans to do this now, the potential for tremendous growth exists considering that the Husum rural center is 386 acres and BZ Corner is 112 acres. Given the current size of

the rural centers, and if sewer and water are provided, Husum could potentially have as many as 2,864 houses and BZ Corner 672. Total potential residential development within a one-mile corridor from Gilmer Creek to Northwestern Lake is about 4,380 residences (Fig. IV-6).

The county zoning ordinance permits a wide variety of commercial development outright in the rural centers. Existing commercial development in the area is relatively low. The Shoreline Master Plan prohibits additional commercial development within the 200-foot shoreline zone outside the rural centers of Husum and BZ Corner. Commercial development in the upslope areas outside of Husum and BZ Corner is regulated by the county zoning ordinance and is limited to agricultural and forestry activities, or activities that serve these purposes. A wide range of commercial development activities are permitted in the Husum and BZ Corner rural centers either outright or conditionally.

In summary, Alternative 1 provides the potential for a great deal of residential and commercial growth.

ALTERNATIVE 2

Alternative 2 would significantly curtail future development of 2,464 acres within the proposed Scenic River boundary. There would be no new residential or commercial development within the boundary with the exception of the 50-acre rural center of Husum. The rural center area would be located 400 feet from the White Salmon River bank and density would be limited to one unit per acre. It is estimated that 24 additional dwellings could be built. Additional growth could occur in BZ Corner, but it would be west of Highway 141 and outside the river boundary. As part of this alternative, the federal government would attempt to acquire select properties with developments that are adversely affecting scenic quality. As a result, the overall density could be reduced.

While this alternative has potential to greatly affect the land within the boundary, it would also provide the greatest opportunities for change

in the future if it was ever decided to be too restrictive. In addition to affecting land within the boundary, it might also create indirect effects outside the boundary. With opportunities restricted inside the boundary, development may occur at an accelerated rate outside. Residential development may accelerate west of Highway 141 between Husum and BZ Corner. Total potential development within a one mile corridor from Gilmer Creek to Northwestern Lake is 2,865 residences (Fig. IV-6).

ALTERNATIVE 3

The potential effects of Alternative 3 would be less than for Alternative 2, but would limit development considerably when compared with Alternative 1. It is estimated that an additional 40 dwellings in Husum and ten in BZ corner could be added within the existing scenic river boundary. An additional five residences could be added outside the rural centers.

New commercial development would not occur in the buffer area and would be limited to that associated with operating farms, orchards and home occupations outside the buffer and rural centers. New commercial development could occur in the rural centers outside the buffer consistent with the county regulations. This alternative would result in less commercial development occurring within the river corridor than could occur under the existing county zoning ordinance.

As with Alternative 2, this scenario may accelerate the rate of development in the surrounding area, especially west of Highway 141 between Husum and BZ Corner. Total potential development within a one mile wide corridor from Gilmer Creek to Northwestern Lake is 3,074 residences (Fig. IV-6).

ALTERNATIVE 4

Alternative 4 has the least effect on potential development, with the exception of Alternative 1. Because of the small area within the boundary (626 acres) the overall effects are considered to be minor. Forty-one new residential dwellings could be built in the upslope area outside of

Husum and BZ Corner. These dwellings would be in clusters. New commercial development in this upslope area would be limited to that associated with operating farms, orchards, and home occupations. There would be only minor effects in Husum because of the very narrow boundary along the rural center and up to 16 new residences could be built within the boundary in BZ Corner. Only a slight increase in the rate of development outside of the river boundary would be likely as a result of this alternative. Total potential development in a one mile corridor between Gilmer Creek and Northwestern Lake is 4,046 residences (Fig. IV-6).

ALTERNATIVE 5

The effects of Alternative 5 are similar to those for Alternative 4, although a larger area (1,168 acres) is included in the river boundary. It is anticipated that the additional acreage would be purchased by the federal government and would not be available for development. There could be an additional 41 residential buildings outside the buffer zone and the rural centers. In contrast with Alternative 4, a quarter-mile frontage on the buffer is required for each residence. Because of the narrow Wild and Scenic River boundary in the Husum rural center, it is estimated that no new residential buildings would be added there (within the boundary). However, up to 53 new dwellings could be added in the commercial core and residential area of BZ Corner. Total potential development within a one mile corridor between Gilmer Creek and Northwestern Lake is 3,682 residences (Fig. IV-6).

ALTERNATIVE 6

In this alternative there would be no additional residential development within the established buffer area along both sides of the river. This accounts for 193 fewer developments than could potentially be built in Alternative 1. Outside the buffer area and excluding the communities of BZ Corner and Husum, the intent of Alternative 6 is similar to the existing county zoning ordinance, assuming that most of the land is highly suited for agriculture or forestry. There would be a slight reduction in the number of additional developments in this area as there

are likely to be some areas not highly suited for forestry or agriculture that could be developed at a higher level than with Alternative 6. Also, the existing county zoning regulation allows for a redivision after 5 years which could not occur with this alternative.

Potential reductions in residential development would be greatest in the BZ Corner and Husum communities as the existing zoning regulation would allow up to 8.7 dwellings/acre while Alternative 6 would permit only 4/acre. In both situations, community water and sewer would have to be provided to permit this level of development. In total, Alternative 6 would provide 741 fewer residents than Alternative 1 assuming that all available land would be developed to the fullest extent. The effect on new commercial development would be very similar to Alternative 3.

CUMULATIVE EFFECTS

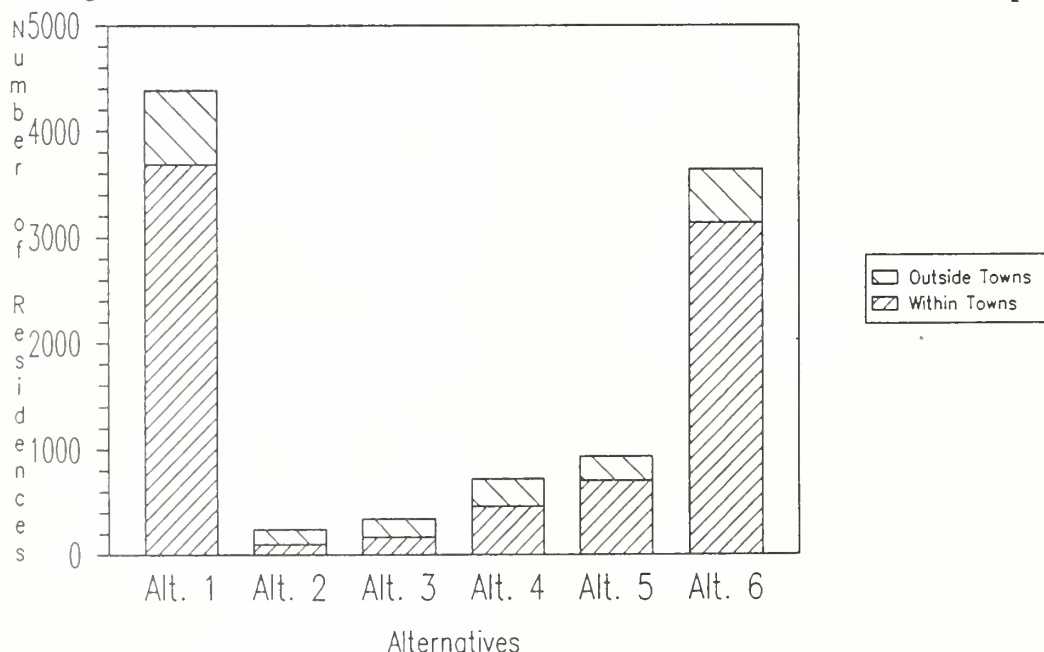
Factors that contribute to the demand for, and type of, residential and commercial development in the river corridor include land value, county zoning regulations and perceived desirability of

the area as well as the overall economy of the nation and region. It is expected that the river corridor will be viewed as a very desirable place to live and there will be strong pressures to develop both residential and commercial uses. As more people visit the Columbia River Gorge National Scenic Area, the White Salmon River area will become better known and will receive more attention from developers. There will be increased use of the river itself for recreation purposes and consequently more people will find the area attractive for living purposes.

MITIGATION

The Forest Service will support Klickitat County in strengthening its zoning regulations so that development occurs at an orderly rate and does not destroy the very values for which people come to the river corridor. Depending on the management alternative selected, the Forest Service would purchase properties and, or, scenic easements to limit the level of growth within the designated river boundary. Landowners would be compensated at the fair market value for any rights purchased.

Figure IV-7: Potential Residences Within 1-Mile Corridor if Recommendations are Adopted



Note: In Alternative 6 there is no specific recommendation for the county to modify zoning densities or size of rural centers.

EFFECTS ON SOCIOECONOMICS

INTRODUCTION

Residents of the White Salmon River valley are concerned that the traditional land uses and lifestyle of the valley will change as a result of the river's inclusion in the National Wild and Scenic River System. Concerns include loss of control over land uses such as forestry, agriculture and grazing, increased population levels and residential development, increased property taxes, increased recreational activity and conflicts between recreationists and property owners, and deterioration of some public services.

The various management alternatives discussed in this document would have different effects on existing land uses, and consequently on the socioeconomic conditions of the river valley. This section describes potential changes that may occur in social and economic conditions as a direct or indirect effect of management alternatives.

It must be noted that there are existing trends and economic pressures in this area that may profoundly affect the future outcome of any alternative. If pressure for residential and commercial development of the White Salmon valley grows as it is expected to, and in the absence of some controls to stop it, there could be a large-scale conversion of agricultural and forest lands to homesites. The Resource Lands zone of the Klickitat County Zoning Ordinance provides for clustering of new developments and maintaining large percentages of any land which is subdivided for agriculture or forest production. If these zoning requirements are enforced, it would take many years before the land was developed to the point that it would have a serious effect on the amount of land available for agriculture and forestry. However, at some point, if land divisions were to continue, the amount of land available for these resource production uses would be reduced or eliminated, and along with it, forestry and agriculture dependent jobs. If these trends continue, it is questionable whether, in the long run, existing resource-based jobs and

lifestyles in this immediate area would be sustained under any of the alternatives.

ECONOMICS

FORESTRY

Alternative 1

In Alternative 1, forest practices would continue to be regulated by state and county guidelines. The revised county Shoreline Master Plan would cause a decrease in allowable timber harvest within a 50-foot buffer area adjacent to the river after 10 years. This would result in some decrease in revenue to individuals employed in the timber industry. Other changes in economic conditions would be likely to follow existing trends for the state and region.

As pointed out in the Introduction, if pressure for residential and commercial development of the White Salmon valley continues to grow, there could be a long-term, substantial conversion of forest lands to homesites. This would reduce or eliminate the amount of land available for forestry and along with it, forestry dependent jobs.

Alternative 2

The buffer area in Alternative 2 would remove about 550 acres from timber production. Other restrictions would remove about 523 additional acres from production, for an approximate total of 1,073 acres removed from timber production within the river corridor. This would leave only about 300 acres of land still available for timber production within the river boundary, and even these acres would be restricted to uneven-aged management. See Figure IV-4 for a comparison of the restrictions on timber harvest between the alternatives.

If it is assumed that the growth rate for timber in the river boundary were 130 cubic feet/acre/year, approximately 140,000 cubic feet of timber/

year would not be available for commodity use. This volume/year would equate to approximately six jobs (based on data supplied by Fox, 1990, Forest Service Region Six Economist).

Indirect effects may include increased residential development on land outside the boundary which was previously used for timber production. This would provide some increased property tax revenue to the county.

Alternative 3

Boundaries under Alternative 3 contain 1,031 acres of forested land. This alternative would remove approximately 350 acres of timber from the buffer area, and there would be some restrictions on the remaining 650-700 acres within the river boundary. The effects of this alternative would be similar in nature to those for Alternative 2, but only about a third as much land would be affected. If the assumption is made that the restrictions on the 650-700 acres would limit potential harvest to about half of the potential, there would be about 89,000 cubic feet/year unavailable for commodity use and would equate to a direct loss of approximately four jobs.

Alternative 4

Because of the narrow buffer area in this alternative, it would have fewer impacts than Alternatives 2 and 3. Approximately 200 acres in the buffer would not be available for commodity purposes resulting in the direct loss of about 1½ jobs. However, since the boundaries are so small in this alternative, the overall, long-term effects would be much closer to those stated in Alternative 1.

Alternative 5

Approximately 850 acres of timber land are within the boundary in this alternative. The buffer area in this alternative is similar to that in Alternative 4; however, additional acres would be affected by acquisitions of land for recreation purposes. Economic effects under this alternative would be greater for timber-related jobs than for Alternative 4, and approximately three jobs

would be directly affected. However, additional economic opportunities related to increased recreation could compensate for some of this reduction. As in Alternative 4, the overall, long-term effects would be closer to those stated in Alternative 1.

Alternative 6

Most of the existing forest land would become National Forest System lands under this alternative and would not be managed for timber production purposes. Approximately 940 acres would not be available for harvest resulting in the loss of four timber related jobs. The SDS Timber Co. would exchange all of their forest land to the Forest Service and would receive equivalent forest lands in return. While their land base would remain constant, the total land available for forestry purposes in the county would decrease. It could be anticipated that most of the forest lands in the river corridor would be converted to purposes other than forestry in the future. If that assumption would be true, an effect of this alternative would be to accelerate this process and to move it in a direction other than residential development.

AGRICULTURE AND GRAZING

Alternative 1

In the short term, current economic trends would be expected to continue under Alternative 1 because agriculture and grazing activities would continue to be regulated under existing state and county laws. However, in the long term, pressures to convert agriculture and forest lands to residential and commercial uses (as discussed in the Introduction) may remove most of the acreage from agricultural uses, thus reducing or eliminating any agriculture-dependent jobs.

Alternative 2

This alternative includes about 100 acres of orchards, valued at approximately \$2,600 per acre/year in personal income and benefits to orchard workers and fruit packers (Bloxom, Jr., 1991). Eighteen to 28 acres would be eliminated from within the buffer area, in this alternative,

resulting in a loss of \$46,800 to \$72,800 per year in personal income and benefits to orchard workers and fruit packers. Prohibitions against new agricultural clearings within the buffer would prevent increased income which could be realized if orchards were allowed to expand in this area.

This alternative includes about 440 acres of agricultural land. Productivity figures are not available at this time, but, under this alternative, between 74 and 148 acres of land would be removed from agriculture.

Alternative 3

This alternative includes approximately 90 acres of orchards within the boundary. The maximum of 18 acres which fall within the buffer area would be allowed to remain in fruit production, so there would be no loss in personal income to orchard workers. Prohibitions against new agricultural clearings within the buffer would prevent increased income which could be realized if orchards were allowed to expand.

There are about 410 acres of other agricultural land within the boundary in this alternative, all of which would be able to stay in production. Although grazing is not a large use, it would be substantially limited under this alternative.

Alternative 4

Of the 74 acres of agricultural land and the 14 acres of orchard land in this alternative, none would be eliminated from the buffer area. Prohibitions against new agricultural clearings within the buffer would prevent increased income which could be realized if orchards were allowed to expand. In addition, grazing could continue with some restrictions.

Alternative 5

Of the 90 acres of agricultural land and the 14 acres of orchard land contained in the boundaries in this alternative, none would be eliminated from the buffer area. Prohibitions against new agricultural clearings within the buffer would prevent increased income which could be realized

if orchards were allowed to expand. It is somewhat difficult to estimate economic effects of this alternative. Although the boundaries are narrow and the buffer area is small under this alternative, a large amount of land would be allocated to recreation, and might displace other land uses. Economic opportunities related to recreation could compensate for some of these effects.

Alternative 6

The effects from this alternative would be very similar to those of Alternative 3.

LAND VALUES AND COUNTY REVENUES

It is not clear exactly what the effects of Wild and Scenic River management would be on property values. On one hand, based on experience in other areas designated by Congress, values for residential properties would probably rise in Alternatives 2-6. There are two main reasons for this: (1) due to restrictions on development, densities, road construction, timber harvest, etc., the land within the boundary would develop an assurance that attractive environmental amenities would likely remain, and (2) the reductions in density result in fewer parcels being available for purchase, and this scarcity, particularly of environmentally attractive property, tends to drive up prices. On the other hand, lands which cannot be developed for residential or commercial uses, where forestry or agriculture are the only possible uses, should not increase in value. Because of the lack of knowledge of these relationships, the quantitative effects on property values have not been estimated for the alternatives.

Wild and Scenic River management would affect Klickitat County revenues in at least two respects - the amount of taxes received from private property owners and the amount of payments received from the federal government. In all alternatives, private property which would be acquired by the Forest Service would come off the county tax rolls. In addition, restrictions which would reduce the existing value of a property, such as prohibitions on harvesting timber from forested lands, would reduce the tax revenues which the county is currently

receiving. This would be offset to some degree by: (1) payments to Klickitat County from the National Forest receipts 25 percent fund (The 25% Fund Act of 1908) which makes payments to counties based on National Forest receipts and the amount of National Forest lands located within the county; and (2) PILT (Payments in Lieu of Taxes) revenue paid to the county which is based in part on the total amount of federal acreage within the county.

Another consideration is restrictions which would prevent a property from increasing in value, such as restrictions on the number of houses which could be built. Such restrictions would limit the increase in tax revenues which the County would receive compared with what it would receive if there were no such restrictions. However, this would not reduce tax revenues which the county is currently receiving.

In all alternatives except Alternative 1, the result is a lower potential total income for the county. If there is no corresponding reduction in County costs (of which none is expected), the tax burden

would be shifted to those people who are still paying taxes.

The table in Figure IV-8, compares estimated potential losses in county tax receipts with estimated increases in federal payments to the county for each alternative. The potential tax losses would result primarily from no longer harvesting forest lands that have been acquired by the federal government in fee or are restricted through scenic easements. And, in Alternative 2, a small amount of agricultural land would be removed from production. Additional payments are from the National Forest receipts 25% fund and PILT. Figure IV-9 graphically compares these probable revenue changes.

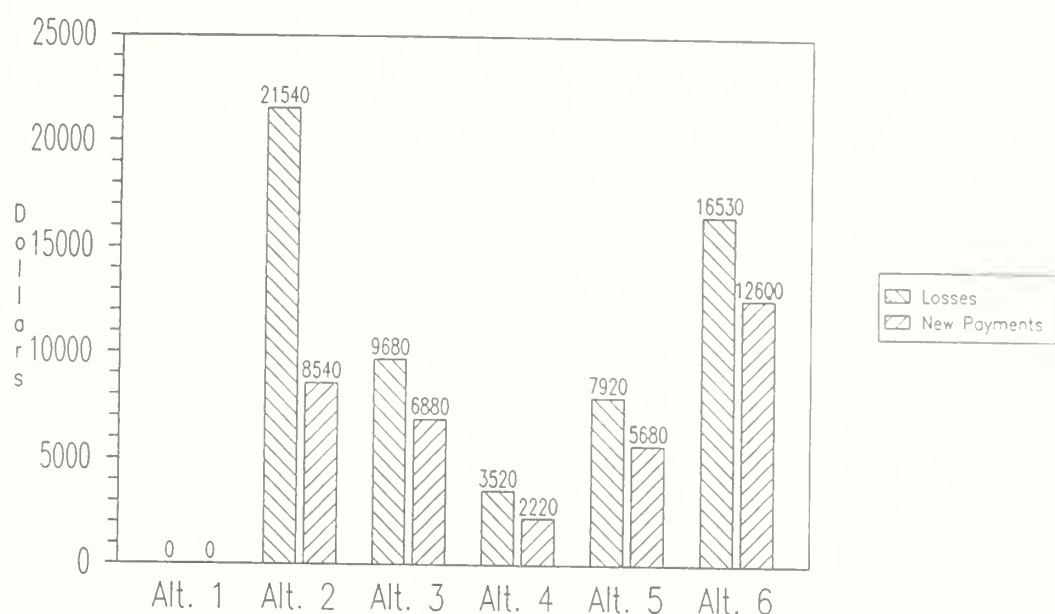
Figure IV-8 also includes a figure for potential tax increases which would be foregone for each alternative. This would result from restrictions on the number of residences which could be built and really represents future tax increases which could not be collected (rather than a loss of existing tax revenues) since, except in Alternative 2, no existing houses would be removed.

Figure IV-8: Potential Changes in County Revenues

	ALTER-NATIVE 1	ALTER-NATIVE 2	ALTER-NATIVE 3	ALTER-NATIVE 4	ALTER-NATIVE 5	ALTERNATIVE 6
Forest Land with No Harvest	0	1,073	550	200	450	940
Reductions in Agricultural Acreage	0	247	0	0	0	0
Losses in Property Tax Revenues						
Forest Lands	0	-\$18,870	-\$9,680	-\$3,520	-\$7,920	-\$16,530
Agricultural Lands	0	-\$2,670	0	0	0	0
Total	0	-\$21,540	-\$9,680	-\$3,520	-\$7,920	-\$16,530
Probable Federal Fee Ownership	0	770	600	200	500	1,100
Additional Payments to Klickitat County	0	\$8,540	\$6,880	\$2,220	\$5,680	\$12,600
Potential Residences, 1-Mile Corridor	4,379	2,865	3,074	4,046	3,682	3,638
Reduction in Potential Residences	0	1,514	1,305	333	697	741
Potential Tax Increases Foregone ¹	0	\$567,950	\$489,540	\$124,920	\$261,470	\$277,970

¹Note: these figures display the fall-down in tax receipts compared with the maximum development densities allowed under existing zoning regulations. Before the maximum potential level of tax increase could occur, there would be new costs to the county for things such as additional roads, road maintenance, police and fire protection, development of sewer and water systems for BZ Corner and Husum, new schools, etc. Studies have concluded that this type of development often results in greater expenditures to a county than the tax revenues that are realized (Mazeski, 1991).

Figure IV-9: Probable Changes in County Revenues



RECREATION

Alternative 1

No restrooms, rest stops or other facilities would be developed by the Forest Service in this alternative. This could result in economic opportunities for private providers of goods and services. However, recreationists might incur greater financial impacts in the form of private facility user fees than they would under other alternatives.

Commercial outfitters and guides would have more growth opportunities under this alternative and would not be required to pay permit fees, purchase liability insurance, or meet safety requirements in compliance with Forest Service Special Use Permit regulations. On the other hand, there would be no regulation of the outfitters and any number of new companies could become established on the river making it more difficult for any of them to earn a living. Also, if use increases to a very high level, it would decrease the quality of the recreation opportunity available to the public.

Alternative 2

Commercial outfitters would not be able to expand their number of clientele under this alternative, but would be assured of providing a certain type of experience to those they serve over the long term. Outfitters would have additional economic impacts of paying permit fees, purchasing liability insurance, and required safety equipment. This could result in higher fees paid by recreationists to commercial guides.

Private boaters would also experience impacts due to use restrictions and regulations requiring safety equipment, but these effects might be compensated for by the assurance of a "semi-primitive" experience and increased safety. A potential economic benefit for private boaters under this alternative would be the provision of public access by the Forest Service, thereby providing some regulation of fees charged for access to the river.

Alternative 3

If a permit system were implemented under this alternative, use would be allocated between private and commercial boaters, based on percentage of

use by both groups at the time limits were imposed. These actions would prevent new outfitters from operating on the river, and those currently operating would not have additional opportunities. Recreationists using the services of outfitters might pay higher fees in the future if outfitters raise their rates to compensate for increased expenses and limitations on boating opportunities. Impacts to private boaters would be somewhat less than for Alternative 2 because they would not be required to have permits.

Alternative 4

There would be the opportunity for increased whitewater recreation to occur in this alternative which could have positive economic benefits for local service businesses and for the outfitters permitted on the river. It is not possible to estimate the level of these effects since the actual use levels, if limits were to become necessary, would be established as part of the monitoring process during management of the river.

Alternative 5

This alternative allows a substantial increase in boating opportunities, provided a "roaded natural" experience is maintained. High use levels may translate into the greatest immediate economic gain for commercial outfitters and other service providers.

Economic effects on commercial outfitters are difficult to estimate under this alternative because the "free market" determines the amount of business an outfitter does. This alternative would increase competition for customers, and might keep the price of guide services from escalating as they might under other allocation systems.

Alternative 6

In the short term, there would be little social or economic effects as a result of Alternative 6. Most of the existing outfitter/guides would continue to operate as they have in past years. The same would be true for the private boaters.

As use increases, measures to keep use within stated objectives would be implemented. Initially, these measures would be designed to better dis-

tribute use rather than "limit" use. There would be an impact on all river users in that they might have to plan ahead to be sure they can make a river trip when they desire. Rather than alter their plans, some users might decide to cancel because of this inconvenience. However, there would still be opportunities for everyone to enjoy the river at some time and they would be assured of a quality trip.

If these measures fail to keep use of the river within the objectives for the desired recreational experience, a permit system would need to be initiated. A permit system would have negative impacts to both the permitted guides and the private boaters. If a permit system is needed in the future, permits would be distributed under a "freedom of choice" system. The Forest Service would administer the system by providing commercial and private users an equal opportunity to purchase permits. This could have an impact on the outfitter/guides because they would not be guaranteed a specific number clients. Private users would have to compete for permits and would have to plan ahead to be sure of having a permit when they arrive at the landing. Limiting use of the river would reduce potential profits that the outfitters could realize, assuming that there would continue to be a demand for guided trips.

SOCIAL

ALTERNATIVE 1

In the short run, current social trends would continue. It is anticipated that with increasing land values, large acreages would be converted from agricultural and forestry uses to residential and commercial developments during a long-term period. This would cause substantial changes in the lifestyles and the type of people who live in the valley. Over the long term, there would likely be more "hobby" ranches rather than "working" farms and ranches, and the goals of the residents might change significantly.

Potential for impacts on landowners from recreation use (such as trespass, litter, fire, increased traffic, etc.) are greatest under this alternative. No public land would be managed for access or facility

development and no efforts would be made to monitor resource conditions or use levels. It is expected that use levels would continue to increase, and without provisions for access, facilities, monitoring, and enforcement, impacts to private landowners would likely increase. This alternative would cause the greatest impact on local search and rescue personnel.

The issue of liability is addressed in the Landowner Liability Limitation Act (RCW 2.24200-210) in Section III of Appendix E, and is the same for all alternatives.

ALTERNATIVE 2

This alternative could result in a displacement of some people employed in timber, agriculture, ranching and fruit production. Opportunities for relocating within the river boundary would be small and the land values could increase significantly, which might make it difficult for those on low and fixed incomes to remain.

Impacts to private landowners from recreation use would be lowest under this alternative. The amount of land acquired would provide public access and facilities, boating use would be limited to current levels, and monitoring and enforcement programs would minimize impacts to private property from recreational use. This alternative would have the least effect on local search and rescue personnel.

This alternative would have the widest buffers, and all the acreage which remained in private ownership, approximately 1,700 acres, would be under scenic easements. Because of this, the amount of Forest Service involvement in landowner's decisions about some aspects of what they could do on their land would be the greatest.

ALTERNATIVE 3

The social effects of this alternative are similar to Alternative 2 but would be less severe since there would be less land affected.

Impacts to private landowners and search and rescue crews from recreation use might be slightly higher than under Alternative 2 due to the increase in boating use levels and development of trails

within the corridor. Providing trail access might focus recreation use on publicly owned land, but recreationists might also gain access to private lands, intentionally or unintentionally.

It is estimated that scenic easements would cover about 600 acres of private land. This is a little more than $\frac{1}{3}$ the acreage under scenic easements in Alternative 2. The Forest Service would be involved with these landowners in deciding some aspects of what could be done on those lands.

ALTERNATIVE 4

It is unlikely that this alternative would cause displacement of many residents employed in timber, agriculture, ranching or fruit production. Consequently, few impacts would occur to employment and residential patterns.

Impacts to private landowners and search and rescue crews from recreation use might be higher for this alternative than for Alternatives 2 and 3 due to increased boating use levels and the development of trails and picnic facilities above and below Husum.

The buffers and other private lands expected to be covered by scenic easements are estimated at about 300 acres. Owners of these lands would have to work with the Forest Service in deciding some aspects of what they could do on their lands.

ALTERNATIVE 5

There would be some displacement of residents employed in the timber industry but it would be less than in Alternative 3. There would be little impact to those employed in agriculture, ranching and fruit production because, even though significantly developed recreation facilities would not be located on lands presently used for agriculture.

This alternative has the highest potential for impacts to private landowners and search and rescue crews from recreation use other than Alternative 1, due to increased boating use levels, development of trails, picnic facilities and a campground. Facility development might concentrate recreation use on public land, but there is the possibility that recre-

ationists might wander onto private property, intentionally or unintentionally.

The buffers and other private lands expected to be covered by scenic easements are estimated at about 200 acres. This is the least acreage on which owners would have to work with the Forest Service in deciding some aspects of what they could do with their lands.

ALTERNATIVE 6

The effects of this alternative are similar to those of Alternative 3. There would be more public lands in the river corridor than in the other alternatives. This would be offset because most of the public ownership would result from a large land exchange and, as a result, there would be less National Forest lands available to the public in another part of the state. Residents living in the corridor should experience less impact from recreationists than would be experienced under the other alternatives because of the increased public lands. However, since there will be a higher level of whitewater recreation use than in Alternative 3, the impacts on local search and rescue personnel would be greater.

Scenic easements would be purchased on approximately 400 acres. While these owners would be compensated for their rights, they would be impacted because they would have to work with the Forest Service in deciding some aspects of how they manage their lands.

CUMULATIVE EFFECTS

In addition to the above estimated effects resulting from implementation of the various alternatives, there are other important factors that will contribute to the social and economic well-being of the residents living in the White Salmon River valley. In general, the overall effects of these factors might cause significant changes in the present forestry/agriculture-related economy of the valley.

It is anticipated that the Pacific Northwest will experience accelerated population growth because of desirable living conditions and, in general, a healthy economic climate. This growth will tend to raise property values as people from outside the area who might be used to higher property values move into the area. The effect of this trend might be displacement of some of the current residents who might find it less desirable to stay in the valley due to increased living costs and the overall change in lifestyle of valley residents. In addition, pressure might increase to convert both agricultural and forest lands to residential uses (Harper, et. al. 1990).

Regional trends in national forest timber harvest will likely cause significant reductions in forestry related employment. This effect will be offset somewhat by increased employment in recreation and tourism related jobs. The newly created Columbia River Gorge National Scenic Area might tend to increase visitation to the area and the White Salmon River valley may also receive more use as a result. The National Scenic Area Act provides for the establishment of a major destination conference center on the Washington side of the Columbia River. The decision has been made to locate the center in Stevenson which is relatively close to the White Salmon River. Whitewater recreation use is growing nationally and the White Salmon River will likely experience similar increases, regardless of Wild and Scenic River management.

MITIGATION

While there are likely to be strong pressures resulting in changes in the current economic structure and lifestyles of the valley, there are some measures that could lessen these trends. Depending on the alternative selected for the final management plan, the Forest Service could encourage Klickitat County to consider incentives to landowners to continue present agriculture and forestry management practices. In addition, the Forest Service has authority to purchase property rights from landowners. With such purchases, landowners would receive compensation at a fair market value and land uses would continue to meet management plan objectives.

Figure IV-10: SUMMARY OF EFFECTS

	ALTERNATIVE 1	ALTERNATIVE 2
MANAGEMENT THEME	Manage Under Existing County and State Laws Only (NEPA no action alternative).	Enhance all W&S River Values and Increase Natural Character of Area
WATER QUALITY	Decrease in quality from increased development and recreational use.	Minor short-term improvement in quality. Risk of long-term decrease from activities outside river boundaries.
QUANTITY - Low Flows	Long-term decrease in quantity.	Minor increase.
RESIDENT FISH	Population maintained in short run, but suffers severe impacts in long term from uncontrolled recreation use.	Population is significantly reduced unless special harvest regulations implemented.
BIOLOGICAL DIVERSITY	Acreage of mature and old-growth conifer and oak forest significantly reduced; negative effects on some wildlife species. Biological diversity reduced.	Best alternative for enhancement of biodiversity by increasing proportion of late successional old-growth plant and animal communities.
CULTURAL RESOURCES	Significant risk of losing knowledge or material and of vandalism to sites. Opportunities for documenting oral history are lost. No opportunity to compensate landowners to protect sites under existing state and federal laws.	Comprehensive inventory and data base completed permitting development of cultural resource management and monitoring plans. Interpretation of cultural systems rather than individual sites. Compensation available to landowners to protect sites.
RECREATION	Decrease in naturalness reduces quality of experience. Sharp increase in white water boating reduces opportunity for solitude, but large number of people can experience river. No guaranteed public access.	Natural appearance of river is enhanced providing high quality experience, but fewer people can experience. Public access is assured. Few new recreation experiences provided.
LANDSCAPE CHARACTER	Significant long-term change due to residential development. Residences become dominant as seen from highway 141. Reduction in forested area. More residences and development seen from river.	Most natural appearing landscape as viewed from the highway and river. Significant change to area outside river boundary from development.
LAND USES FORESTRY	Little change in short term, but significant reduction in area managed over long term due to residential development and conversion to agriculture uses.	Greatest reduction in acres available for timber production (1,073 acres).
AGRICULTURE	Slight reduction in short term but significant reduction in long term because of residential development.	Greatest direct reduction in agriculture; some fields and about half of orchards converted to forests; grazing heavily restricted.
RESIDENTIAL/COMMERCIAL	Dramatic increases in residential and commercial development, potential for up to 329 new residences outside of rural centers and up to 2,864 in Husum and 672 in BZ Corner.	Severely restricts new residential and commercial development. No new development outside of rural centers. Limited new development in rural centers.
SOCIAL/ECONOMIC	Slight direct effect on forest and agricultural jobs. Increased economic growth in recreation related activities. Highest level of conflicts between landowners and recreationists. Long-term significant changes in jobs and lifestyles.	Largest direct reduction in agricultural and forest related jobs. Lowest level of landowner/recreationist conflicts. Moderate effects on present lifestyles of residents.

Figure IV-10: SUMMARY OF EFFECTS (continued)

	ALTERNATIVE 3	ALTERNATIVE 4
MANAGEMENT THEME	Maintain Current Character of the River Area	Minimize Effects on Landowners while Focusing Protection on Outstandingly Remarkable (OR) Values
WATER QUALITY	Maintenance of present condition in short term, with risk of degradation in long term from activities outside boundaries.	Little change in present water quality, with potential decrease in the long term.
QUANTITY - Low Flows	No change	minor decrease
RESIDENT FISH	Same as Alternative 2.	Slight negative effects in the short term and moderate effects in long term without special harvest regulation.
BIOLOGICAL DIVERSITY	Generally maintains the current level of biodiversity. Some enhancement of oak communities and associated wildlife species.	Potential for some loss of biodiversity by increasing early successional stages and associated wildlife.
CULTURAL RESOURCES	Comprehensive inventory and data base developed as in Alt. 2 but less area covered. Only sensitive sites are monitored and some opportunities for protection and interpretation are lost as compared with Alt. 2.	Piecemeal inventory permits less protection than in Alts. 2 and 3. Less is learned about the area and there is a greater risk of loss or damage to some sites.
RECREATION	River corridor remains natural, enhancing experience. Slight increase in visitor use causes less opportunity for solitude. Public access to river assured and new recreation opportunities (trails) provided.	Somewhat less natural character changes experience somewhat. Moderate increase in use causes less opportunity for solitude. Public access assured.
LANDSCAPE CHARACTER	Rural, pastoral character is maintained within boundary but significant changes outside. The view from the river is maintained or enhanced. Significant changes in rural centers.	Significant reduction in naturalness as viewed from highway, small reduction as seen from river, caused by increase in residential development.
LAND USES	Moderate reduction in land available for timber production (550 acres). Remaining acres have varying restrictions.	Least effect except for Alt. 1. About 200 acres removed from timber production.
FORESTRY		
AGRICULTURE	Minimal impacts to existing agricultural uses.	Little effect because of narrow boundary.
RESIDENTIAL/COMMERCIAL	Provides for slight increase in residences outside of rural centers and moderate development within rural centers.	Allows greatest number of houses except for Alt. 1.
SOCIAL/ECONOMIC	Minimal reduction in agriculture and slight reduction in forest management related jobs. Minor effects on lifestyles of residents.	Minimal direct effect on agricultural and forest related jobs. Positive economic effect from river recreation. Potential slight increase in user/landowner conflicts. Minor effects on lifestyles.

Figure IV-10: SUMMARY OF EFFECTS (continued)

	ALTERNATIVE 5	ALTERNATIVE 6
MANAGEMENT THEME	Same as Alt. 4, and Provide for a High Level of Recreation Use.	Maintain current character of river area. Protect OR values without undue limits on private land.
WATER QUALITY	Risk of short- and long-term water quality degradation from development outside the boundary and increased recreation use.	Little change in present water quality, with potential decrease over long term from activities outside boundary.
QUANTITY - Low Flows	Minor decrease	No change
RESIDENT FISH	Greatest negative impact to fish population resulting in the need to drastically restrict fishing.	Slight decrease in fish population in short and long term.
BIOLOGICAL DIVERSITY	Similar to Alt. 4 but greater risk of disturbance to some wildlife because of increased recreation development and use.	Similar to Alternative 3 but greater benefits due to greater federal ownership and emphasis on protecting biodiversity.
CULTURAL RESOURCES	Provides less protection than Alts. 2, 3, and 4. Increased risk of damage or loss to cultural properties and interpretive opportunities severely limited.	Effects would be between Alts. 2 and 3. More likely to inventory and discover cultural sites on private land. Good opportunity for off-site interpretation.
RECREATION	High level of public access and recreation, potential for increased conflicts with private landowners and visitors, highest level of white water boating use and less opportunity for solitude.	Similar to Alt. 3 except equal opportunities for private and commercial boaters. Limited number of commercial guides. Greatest amount of federal land for dispersed recreation.
LANDSCAPE CHARACTER	Overall effect similar to Alt. 4, but view from river is better protected. Views around Husum change because of increase in development.	Overall similar to Alt. 3, but potentially has greatest number of residences within boundary (particularly in rural centers) except for Alt. 1.
LAND USES		
FORESTRY	Similar to Alt. 4 but more area affected, about 450 acres removed from timber production.	Similar to Alt. 2 - 1,040 acres removed from timber production.
AGRICULTURE	Minimal effect on agricultural uses.	Minimal impacts to existing agricultural uses.
RESIDENTIAL/COMMERCIAL	Similar to Alternative 4.	Similar to Alternative 3.
SOCIAL/ECONOMIC	Minimal direct effect on forest and agricultural related jobs. Positive economic effect from recreation. Potential increase in user/landowner conflicts.	Similar to Alternative 3.

ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

Under any of the alternatives, adverse environmental effects would occur. However, except for Alternative 1, these effects would be caused by activities outside of the designated Wild and Scenic River area, or from situations over which the Forest Service has limited control. Because all of the area surrounding the designated river is in private ownership, the Forest Service will have extremely limited influence on activities occurring there. Activities occurring in these areas will affect the designated river area. Because it is relatively small, protective measures, in some cases, will not be enough to offset outside influences.

With Alternative 1, adverse environmental effects would be from heavy residential development and unmanaged recreation use. Water quality and quantity would decrease and cultural resources would be adversely impacted.

Water quality and quantity would decrease in Alternatives 4 and 5 because of activities occurring outside of the river corridor. The resident fish population would decrease in all alternatives from sport fishing unless special protective measures are implemented by the state. There would be some residential development under all alternatives which would adversely affect the natural and pastoral landscape character, the degree depending on the alternative.

LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

All of the alternatives would preclude hydropower development and other water projects that could adversely affect river values. This prohibition comes from the congressional act of designating the lower White Salmon as a National Scenic River, not from the management actions under the alternatives. None of the alternatives contains

actions that require a major loss of short-term use in order to achieve long-term protection. However, under Alternative 1, foreseeable short-term uses could likely affect long-term productivity of agricultural and forest lands as well as instream resources.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

All of the alternatives, at varying levels, allow activities that might be considered irreversible. While residential and commercial developments, as well as recreation developments, could be removed at a later date, they are considered permanent for all practical purposes. The same may be said of conversions of forest land to agricultural, but to a lesser extent. Alternative 1 contains the potential for the greatest level of these activities and Alternative 2, the least.

Alternatives 2 through 6 contain actions that would cause irretrievable commitments of resources to varying levels. Some timber harvest, development of homes and agricultural practices would not occur as a result of implementing any of the alternatives, except for Alternative 1. The same is true for whitewater recreation use although, with the exception of Alternative 2, restrictions on this use would likely not be needed for a number of years (depending on the alternative and how rapidly use of the river grows).

COORDINATION WITH OTHER PLANS

GIFFORD PINCHOT NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN

The Columbia River Gorge National Scenic Area Act directed that the White Salmon National Wild and Scenic River would be administered by the Secretary of Agriculture, and such administration is delegated to the Forest Service. The White Salmon River is not within the boundary of any national forest, so the lands which the Forest Service acquires within the boundary do not officially become part of any national forest. Instead, they are classified as National Forest System (NFS) lands. However, since it is located closest to the Gifford Pinchot National Forest, the NFS lands within the wild and scenic river boundary will be considered part of the Gifford Pinchot National Forest for reporting purposes. These lands will also come under the umbrella of the Gifford Pinchot Land and Resource Management Plan (LRMP).

For a number of reasons, the White Salmon Wild and Scenic River was not addressed in the Gifford Pinchot National Forest LRMP. However, when the LRMP for the Gifford Pinchot National Forest is amended or revised, the management plan which is part of this document will be incorporated.

ANADROMOUS FISH

The migration of anadromous fish up the White Salmon River has been blocked since construction of Condit Dam (RM 3.3) in 1913. Various state and federal agencies and the Yakima Indian Nation are considering options to enhance anadromous runs returning to tributaries of the Columbia River. The White Salmon River will be considered in this effort, and options to reintroduce salmon and steelhead above the dam have been developed.

The Forest Service does not have fisheries management authority, therefore, this EIS does not address alternatives or potential effects of

re-establishing anadromous fish above the dam. However, the Forest Service, having the responsibility for planning and managing the designated Wild and Scenic portion of the river, will require the various fisheries agencies to assess the impacts to Wild and Scenic River values as part of determining the reintroduction issue.

Such an assessment must consider the potential effects to the outstandingly remarkable values for which the river was designated and the implications for Indian treaty rights. Further, the fisheries agencies must assure the Forest Service that the OR values in the designated Wild and Scenic section will be protected under the selected fisheries management plan for the river.

Although anadromous fish have not been present in the White Salmon River above Condit Dam since 1913, both salmon and steelhead did use the designated Wild and Scenic section before the dam was built. Therefore, it is appropriate to consider anadromous fish as a potential OR value. As part of the decision-making process for reintroduction of anadromous fish, the Forest Service, with input from fisheries agencies and the Yakima Indian Nation, would decide if anadromous fish would be considered an OR value. This determination could influence the reintroduction question and how the fisheries resource would be managed. A more detailed discussion of the anadromous fish reintroduction issue appears in Appendix C.

COUNTY ZONING AND SHORELINE MASTER PLAN

Klickitat County zoning ordinances and the Shoreline Master Plan currently regulate residential and commercial development. These would continue to be the primary land use control mechanisms if they are consistent with the provisions of this management plan. Under that scenario, the county would continue to be the primary governing agency for land use and development.

If the management plan contains stronger land use and development provisions than currently exist and if the county is unwilling to adopt these stronger measures, then the federal government would have to accomplish these provisions through its acquisition authority. There is the opportunity for both the federal government and the county to play a partnership role in meeting the intent of the Wild and Scenic Rivers Act. In this scenario, the county would continue its authorities and the federal government would acquire interests in selected properties where a higher level of protection is desired.

UPPER WHITE SALMON WILD AND SCENIC RIVER SUITABILITY STUDY

The portion of the river above the designated "Scenic" section to its headwaters is currently being studied to see if it is suitable for Wild and Scenic designation. The local phase of the study was completed in summer of 1991. The process

of review by the Chief's Office, the Department of Agriculture, the Office of Management and Budget, and the White House is now beginning. If this portion is recommended to the Congress and if Congress designates it as part of the National Wild and Scenic Rivers System, a management plan will be developed. In the development of this plan, consideration and coordination would be given for the currently designated section and it is likely that there would be just one plan for the entire river length.

An alternative being considered in the suitability study for the upper section is to designate the entire river from the headwaters to its mouth at the Columbia River as part of the Washington State Scenic River system. If this alternative is selected and the state designates the river under its system, it is anticipated that the state and the federal government would cooperate and manage together that portion designated under the national system. In this event, there would be the advantage of utilizing the authorities and resources of the local, state and federal governments.

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**LISTS
OF
PREPARERS
AND
TASK FORCE
MEMBERS**

PREPARERS

Mary Bean - Outdoor Recreation Planner

- B.A., Sociology/Anthropology
- M.S., Wildland Recreation Management
- 7 years experience in recreation, visitor services and interpretive planning

Mike Boynton - Archaeologist

- B.A., Anthropology/Archaeology
- M.A., Anthropology/Archaeology
- 21 years experience in archaeological inventory and evaluation, and cultural resource management and program development

Jim Caudill - Economist

- B.A., Geography
- M.A., Agricultural Economics
- 4 years experience in economic research and natural resource policy evaluation

Robin Dobson - Ecologist/Natural Resource Planner

- B.S., Biochemistry
- M.S., Plant Pathology
- Ph.D., Plant Pathology
- 10 years experience in botanical and ecological research and natural resource planning

Al Grapel - Landscape Architect

- Bachelor of Landscape Architecture
- 28 years experience in landscape architecture, visual resource management, and recreation planning

Jim Hulbert - Forester

- B.S., Forest Management
- M.S., Natural Resources Administration
- 24 years experience in natural resource management and planning

Mary Maj - Wildlife Biologist

- B.S., Fish and Wildlife Management
- M.S., Fish and Wildlife Management
- 12 years experience in wildlife management, range management, and land management planning

Steve Mellor - Hydrologist

- B.S., Biology
- M.S., Aquatic Ecology
- 16 years experience in hydrology, natural resource management planning, and environmental education

RIVERS TASK FORCE MEMBERS

LOWER WHITE SALMON	ASSOCIATION
Bakke, Sverre Chamberlain, Bob Couche, Steve Eddy, Bruce Gorman, Bob Gross, William Hall, Jon Jackson, Johnny Knudson, Pam Locke, Bill Sandlin, Mike Schneider, Bob Schuster, Elmer Smith, Richard C. Speedis, Walter Thie, Krista Weiler, Bill White, Dennis Yallup, Bill Zoller, Phil Zoller, Tracy	Klickitat County Commissioner SDS Lumber Company Forest Service, Mt. Adams Ranger District Pacific Power and Light Klickitat County White Salmon Launch Point White Water Market Indian River People Washington State Dept. of Fisheries Husum Landowner Mt. Adams Orchards Lower Columbia Canoe Club Yakima Indian Nation Husum Landowner Yakima Indian Nation Botanist Washington Environmental Council Friends of The White Salmon Yakima Indian Nation Phil's Guide Service White Water Adventure

APPENDICES A THROUGH C

APPENDIX A

SUMMARY OF LEGAL AND POLICY REQUIREMENTS FOR MANAGING WILD AND SCENIC RIVERS

The summaries of the Wild and Scenic Rivers Act and the interpretations of the scenic river area classification criteria from the National Wild and Scenic Rivers System; Final Revised Guidelines for Eligibility, Classification, and Management of River Areas have been moved to Section IV of Appendix E, The Management Plan.

APPENDIX B

ADDITIONAL REGULATORY AUTHORITIES

The summaries of the Additional Regulatory Authorities have been moved to Section IV of Appendix E, The Management Plan.

APPENDIX C

ANADROMOUS FISH

THE ISSUE

Before Condit Dam was constructed in 1913, the White Salmon River supported anadromous fish in the form of spring and fall runs of chinook salmon and steelhead. Although the exact range of these runs is unknown, most professional biologists agree that salmon used the river to at least Husum Falls, and steelhead to at least RM 16.2, the site of a large waterfall. Some local residents have signed affidavits stating that steelhead were seen in Trout Lake Creek, above the waterfall, before construction of the dam (Draft White Salmon Fish Productivity Report, 1989).

The issue of reintroducing anadromous fish above the dam has been debated for many years. There are various opinions and agendas among the many interest groups and agencies involved in the debate. Among these are:

- Since blockage of salmon and steelhead runs with construction of Condit Dam in 1913, a population of resident rainbow trout has flourished. This fishery is considered one of the best in the region and was determined to be an outstandingly remarkable value in the resource assessment of the designated Scenic section of the river. Opportunities for trophy fishing are good (White Salmon Resource Assessment, 1989). The Washington Department of Fisheries would like to maintain this resident fishery as would several local fishing guides and some anglers. Fishery biologists admit there are a lot of unknowns regarding the effects on the resident fisheries from reintroducing salmon or steelhead above the dam. However, most would expect significant reductions (50-90 percent, depending on the level of reintroduction) if steelhead were added. This reduction could be controlled by limiting the number and location of steelhead transplants.

Because salmon do not compete with rainbow like steelhead do, introduction of chinook or coho salmon would be expected to reduce resident trout by only 10 percent (Draft White Salmon River Productivity Report 1989).

- The Yakima Indian Nation has gone on record asking for removal of Condit Dam and the restoration of salmon and steelhead runs. Tribes that are party to the treaty participate in fish management decisions affecting the Columbia River and its tributaries. The Indian Nation reserved hunting and fishing rights in their usual and accustomed places in the Treaty of 1855. Husum Falls, located within the Scenic River boundary, was once an important fishing spot for Indians.
- The Washington Department of Fisheries and the Washington Department of Wildlife have taken opposing positions on reintroduction. The Department of Wildlife manages sport fishing, and they do not want to see the resident rainbow trout population impacted. The Department of Fisheries manages salmon and would like to increase salmon numbers and habitat through a reintroduction program.
- Two federal agencies, the National Marine Fisheries Service (NMFS) and the Fish & Wildlife Service, have supported reintroduction.
- Local landowners differ in their support for reintroduction. Some have expressed concern about the effects from sport fishing and Indian harvesting if anadromous fish were brought back to the river. Others welcome the idea and look forward to being able to fish for salmon or steelhead in their backyards.

- Conservation groups have generally supported some level of reintroduction to bring back a more natural condition to the river.
- The Forest Service, in managing the designated section of the river, has not taken a position on the issue except to point out that a thorough assessment must be completed to determine what the effects would be on river values.

It is difficult to predict what the final outcome will be, but it seems safe to say that the White Salmon River will play some role in the attempt to increase anadromous fish returning to the Columbia River. Whether it will be in the form of a hatchery operation, reintroduction above the dam, or another method, it will likely be made largely by the Columbia Basin Fish & Wildlife Authority (CBFWA).

The Authority is made up of the various state fisheries agencies from Oregon, Washington, Idaho and Montana, as well as applicable Indian interests. It will seek a consensus among its members and then make a recommendation to the Northwest Power Planning Council (NPPC). The NPPC will then attempt to effectuate the enhancement programs through its Fish and Wildlife program. The actual enhancement projects will be accomplished by the Bonneville Power Authority and other hydropower interests, such as Pacific Power & Light Company (PP&L), as mitigation measures for their projects.

CONDIT DAM

Condit Dam, located at river mile (RM) 3.3, has effectively blocked upstream migration of salmon and steelhead since its construction in 1913. The concrete dam, 125 feet high and 471 feet wide, serves to back up the 97-acre Northwestern Lake. The designated section of the river starts at the head of the lake, and the beginning portion of the designated river is actually part of the slack waters.

The dam is owned and operated by Pacific Power Company as a hydroelectric facility. Water is diverted at the dam and descends 5,100 feet via

a wood stave pipe to the powerhouse at RM 2.3. The powerhouse contains two generators with a combined generating capacity of 9,600 KW. Two attempts were made to build a ladder for fish passage after the dam was constructed, but both failed. In 1919 the owners of the project (then Northwestern Electric Company) signed an agreement with the state fish commissioner, releasing the company from the responsibility of maintaining a fishway at the dam. Federal and tribal interests were not parties to this settlement.

Condit Dam received a second license from the Federal Energy Regulatory Commission (FERC) in 1968 and is up for relicense again in 1993. As part of the relicensing process, the various state and federal agencies managing fisheries, along with Pacific Power Company, are studying the feasibility and desirability of providing fish passage and reintroducing anadromous fish to the river above the dam.

In 1980, FERC ordered Pacific Power Company to study the feasibility of providing fish passage above Condit Dam. The study, completed in 1982, concluded that passage is feasible, and the most practical system would be a trap and release system where returning adult fish are trapped at the base of the dam and transported and released above. However, the company has questioned the cost effectiveness of restoration, the potential impacts to resident fish, the quality and quantity of fish habitat, the fish production potential and the selection of species.

PRODUCTIVITY REPORT

To address the company's questions, a study was conducted from 1983 to 1987 by the Washington Department of Fisheries, Washington Department of Wildlife, the National Marine Fisheries Service, and the U.S. Fish & Wildlife Service. The agencies completed stream surveys, planted anadromous fish above Condit Dam, evaluated downstream migrant fish survival at the dam, determined growth and survival rates in certain tributaries, estimated habitat potential, and drafted a habitat management plan acceptable to all agencies.

A Draft White Salmon River Anadromous Fish Productivity Potential report has been completed. The draft report discusses downstream passage potential and survival estimates; potential impacts to Northwestern Lake; potential effects on resident fish habitat quality of the mainstem and tributaries; production potential for steelhead, chinook and coho salmon; and a proposed management plan for reintroduced salmon and steelhead.

The proposed draft plan shows two options for steelhead: the introduction of summer steelhead smolts throughout the White Salmon Basin, or management without steelhead above Condit Dam. Spring chinook salmon fry would be planted in the mainstem above RM 16.2 plus in Trout Lake Creek until a self-sustaining population is developed. Adult fall chinook presently returning to the river would be trapped and released above the dam. Coho fry would be released to the mainstem and tributaries below RM 16.2. The plan also discusses options for downstream migration at the dam, screening requirements for diversions and minimum flow needs.

THE NORTHWEST POWER PLANNING ACT

In 1980, Congress passed the Pacific Northwest Power Planning & Conservation Act (P.L. 96-501). The Act authorized the states of Montana, Idaho, Washington and Oregon to enter into an interstate compact to create a policy-making and planning body for electrical power development and fish and wildlife resources. As a result, the Northwest Power Planning Council (NPPC) was formed and is involved in power planning issues and potential impacts on fish resources in the Columbia River Basin.

In 1982, the NPPC adopted the Columbia River Fish & Wildlife Program (CRFWP) which contains measures to protect and enhance fish and wildlife resources in the Columbia River Basin. The CRFWP's initial goal is to double anadromous fish production in the basin from levels that exist in the early 1980s. The White Salmon River has only one dam between it and the mouth

of the Columbia River and is considered a good candidate to be a part of the fish enhancement program. The CRFWP calls for fish passage at Condit Dam. While the council's plan is not considered a legal mandate, it is expected to weigh heavily in the FERC relicensing process.

As part of the CRFWP, the Northwest Power Planning Council facilitated development of 31 sub-basin plans within the Columbia River basin. The White Salmon River is one of the sub-basins. Its plan was developed by the Washington Department of Wildlife with input from national fish management agencies and the Yakima Indian Nation. The sub-basin plans report on the feasibility and public support for several fish production options. The Power Planning Council has combined all the sub-basin plans through an inter-basin systems planning evaluation to examine the compatibility of the various plans. The Council has produced a Final Integrated System Plan, June 1991, which will become part of the CRFWP. The Integrated System Plan for the White Salmon states:

There are a number of possible strategies that could be implemented for spring chinook on the White Salmon River. At this time, however, the course of action is dependent on passage over the dam. Spring chinook habitat does exist in the upper reaches. Estimated production potential for natural rearing could be up to 112,000 smolts, which could produce up to 3,000 adults.

The Plan further shows that the recommended strategy for spring chinook is natural production with passage over the dam. The Plan does not show passage recommendations for fall chinook, coho or steelhead.

U.S. vs. OREGON SETTLEMENT

In 1983, the United States sued the State of Oregon to reduce preterminal harvest (catching fish before they pass Bonneville Dam) of anadromous fish returning to the Columbia River. This suit was filed in reference to treaties with the four Indian tribes in the Columbia River Basin

(the Yakima, Warm Springs, Nez Perce and Umatilla). As a result, a draft settlement plan, called the Columbia River Fish Management Plan, proposes a series of hatching facilities, one of which would be located at RM 1.5 on the White Salmon. This hatchery would raise 1.5 million spring chinook smolts with the objective of providing harvest opportunities for American Indians at the mouth of the White Salmon. This situation would complicate the introduction and

maintenance of a wild spring chinook stock in the upper river.

TREATY RIGHTS

See the Cultural Resources section of Chapter III for a discussion of the treaty rights reserved by the Yakima Indian Nation and their relationship to anadromous fish.

APPENDIX D

COMMENTS AND RESPONSES

APPENDIX D

COMMENTS ON THE DRAFT EIS AND FOREST SERVICE RESPONSES

INTRODUCTION

540 copies of the Draft EIS were mailed to local, state, and federal agencies and elected officials, various groups and organizations, and individuals who expressed an interest in the planning process. In response, 137 letters or postcards were sent

with comments on the Draft EIS. (In addition, 65 people attended a public meeting in September 1990, in the town of White Salmon where spoken comments on the Draft EIS were solicited in a structured process.) The following table is a demographic summary of the responses that were received:

SUMMARY OF RESPONSES - LOWER WHITE SALMON RIVER DEIS

NUMBER OF RESPONSES

Written Responses	136
Telephone Responses	1
Attendees at Public Meeting	65
Number of Comments	Approx. 800

FORM OF RESPONSE

Postcards	21
Letters	<u>115</u>
Total Written Responses	136

SOURCE OF RESPONSES

State of Washington

Klickitat County Area	42
Seattle Area	11
Other Areas of Washington	<u>18</u>
Total from Washington	71

State of Oregon

Hood River-The Dalles Area	5
Portland Area	50
Other Areas of Oregon	<u>6</u>
Total from Oregon	61

AFFILIATION OF RESPONDENTS

Individuals	94
Local Landowners	11
Agencies of the Federal Government	8
Conservation/Preservation Organizations	5
Plant/Wildlife Organizations	4
Yakima Indian Nation Tribal Government	2
Agencies of Klickitat County	2
Agencies of the State of Washington	2
River Guides/Outfitters	2
Elected Officials of Klickitat County	1
Non-Tribal Government Indian Organization	1
Agricultural Industry	1
Timber Industry	1
Lodging Business	1
Boating Clubs	<u>1</u>
Total Written Responses	136

ANALYSIS OF COMMENTS

All letters and postcards were assigned a commenter number when they were received, and demographic information on each was recorded. The recorded information included the assigned commenter number, the signers, the name of any organization which was being represented, complete address, the form of the response, and the affiliation by type of group to which the commenter belonged. That information was used to provide the summary above.

Each letter was read by a member of the rivers planning team, and every comment which related to the planning area, the planning process, and the document was identified and coded by commenter number and subject. Comments were entered into a computer data base and retrieved by subject groupings. Comments which essentially said the same thing were consolidated. The list of consolidated comments was distributed to the members of the Task Force for information to be used in their discussions leading to the Preferred Alternative. The comments were also discussed by the rivers planning team, and the substantive comments were used as the basis for many revisions of the Draft EIS.

Although there were many comments on different sides of most of the issues, the greatest number of comments were in support of Alternative 2, with modifications which would allow for more

public access to the area in the form of a low-impact trail system. In addition, many people expressed the opinion that biological diversity in the White Salmon River area should be found to be an outstandingly remarkable value. (Many of these comments were probably in response to information distributed by two conservation groups - a couple of the commenters specifically cited a newsletter sent out by one group [Friends of the Columbia River Gorge], and a sheet of maps and recommendations with the name and address of a different group [Friends of the White Salmon] on it was attached to another letter.) The purpose of soliciting comments is to obtain information which addresses the adequacy of the Draft EIS and the merits of the alternatives discussed rather than to tally the number of comments in favor of or opposed to any alternative or idea in order to select the alternative receiving the most "votes." Therefore, most of the comments of the type described in the beginning of this paragraph ended up being consolidated into just a few comments.

Some comments noted typographic, computational, grammatical or minor technical errors in the Draft EIS. These errors have been corrected in the Final EIS without specific mention in this Appendix.

Copies of letters from local, state, and federal government agencies and from public officials are included at the end of this Appendix.

LIST OF GROUPS AND INDIVIDUALS WHO COMMENTED ON THE DRAFT EIS

LETTER NUMBER

ELECTED OFFICIALS AND AGENCIES

LW87	Klickitat County Board of County Commissioners
LW76	Klickitat County Planning Department
LW47	Klickitat County
LW16	WA State Parks & Recreation Commission, Scenic Rivers Program
LW5	WA State Department of Transportation, District 4
LW12	Department of the Air Force, Environmental Planning Office
LW10	Dept of Health & Human Services, Public Health Service
LW72	US Environmental Protection Agency, Region 10
LW126	USDA, Soil Conservation Service
LW79	USDI, Bureau of Indian Affairs, Yakima Agency
LW137	USDI, Bureau of Indian Affairs, Yakima Agency
LW58	USDI, Fish and Wildlife Service
LW132	USDI, Office of the Secretary, Office of Environmental Affairs
LW136	Yakima Indian Nation, Fish, Wildlife Committee
LW135	Yakima Indian Nation, Yakima Tribal Council

ORGANIZATIONS

LW36	Columbia Gorge Audubon
LW106	Columbia Gorge Coalition
LW75	Friends of the Columbia Gorge
LW88	Friends of the White Salmon
LW114	Klickitat-Cascade Mid Columbia River Council
LW15	Mid-Columbia Native Plants Society
LW37	National Wildlife Federation
LW19	Native Plant Society of OR, Portland Chapter
LW4	University Kayak Club
LW24	WA Environmental Council
LW55	WA Environmental Council, Southeast Region

BUSINESSES

LW9	Orchard Hill Inn
LW53	Phil Zoller's Guide Service
LW7	Mt. Adams Orchards Company
LW107	SDS Lumber Company
LW93	White Water Adventure

LIST OF GROUPS AND INDIVIDUALS WHO COMMENTED ON THE DRAFT EIS (continued)

LETTER NUMBER	INDIVIDUALS	LETTER NUMBER	INDIVIDUALS
LW11	Anderson, Francis J.	LW85	Hickok, Gaylen
LW11	Anderson, Pauline G.	LW57	Hoisington, Arthur L.
LW35	Anderson, Joan	LW102	Holzwarth, Charlene
LW122	Anderson, Mark	LW134	Hunting, Penny
LW68	Azar, Leesa	LW81	Jacobson, Alice C.
LW98	Bartholomae, Annette	LW32	Jones, Bill R.
LW29	Baughner, Connie L.	LW103	Jones, Kathleen D.
LW30	Baughner, Eugene J.	LW38	Karpinski, John S.
LW33	Boon, Jack H.	LW6	Kavanaugh, R.
LW82	Bowen, Carolyn, Miss	LW104	Kendall, Peter
LW44	Brooke, Elizabeth M.	LW64	Kerr, George A. D.
LW114	Brouha, Maurice	LW92	Kittleson, Clarice
LW112	Bryer, Elizabeth J.	LW92	Kittleson, Ted G.
LW118	Burger, Scott	LW26	Krampert, Alfred P.
LW31	Burton, Adrienne	LW26	Krampert, Karla M.
LW73	Carlson, Elizabeth S., Mrs.	LW84	Labbe, Randy, Leslie, Jim, and Ted
LW123	Carrigan, Michael	LW8	Lambert, Jim and Pat
LW21	Chapin, Stuart	LW45	Lambert, Jim and Pat
LW34	Chapman, Edna	LW14	Lewis, Karen E.
LW17	Clark, Annie	LW3	Mahlein, Dieter
LW56	Clausen, Phyllis I.	LW121	Mareliele, Jean
LW56	Clausen, Victor H.	LW1	McKnight, Gary
LW124	Condon, Linda M.	LW133	Miller, Francis
LW39	Cross, Laurie	LW60	Miller, Joseph W.
LW97	Dahl, Deanna	LW60	Miller, Margaret M.
LW110	Dancer, Daniel	LW67	Morecroft, Burnice M.
LW99	Dick, Helene Biddle	LW22	Morrison, Jennifer H.
LW89	Dolezal, Helen I.	LW22	Morrison, William J.
LW130	Duffy, Deidre	LW77	Myers, Reuel A.
LW57	Duhrkop, Les	LW125	Nack, Mary
LW66	Fairbank, Chandler D.	LW23	Nisbet, Robert
LW94	Farrell, Elizabeth A.	LW46	Olney, H. D.
LW2	Finlayson, Douglas	LW61	Olson, Sue
LW91	Foote, Tony and Bonnie	LW13	Parker, Martha
LW1	Forgette, Sally	LW26	Pearce, Robert
LW105	Frank, Leo	LW100	Porter, Phil, M D
LW54	Frederick, A. W.	LW51	Pratt, Scott O.
LW127	Gates, Jennifer	LW69	Punja, Manohar M.
LW83	Giles, Gilbert A.	LW119	Radekr, Shivaum
LW95	Graves, Barbara and Steve	LW80	Rempel, Arthur G.
LW120	Harney, Babette	LW50	Reynolds, Bonnie
LW78	Harvey, Bernard M.	LW129	Rice, Susan
LW27	Haywood, B. R.	LW116	Ritchey, Bill

**LIST OF GROUPS AND INDIVIDUALS WHO COMMENTED ON THE DRAFT EIS
(continued)**

LETTER NUMBER	INDIVIDUALS	LETTER NUMBER	INDIVIDUALS
LW109	Rockwell, Michael	LW26	Stahl, Janet J.
LW18	Russell, Nancy N.	LW101	Stevens, Cornelia H.
LW70	Ryan, Lyn and Margaret	LW131	Sundaram, Karena
LW52	Sawyer, W. A.	LW113	Thie, Krista
LW40	Scheuner, Bill and Alma	LW90	Thie, Lawrence H.
LW43	Schneider, Robert J.	LW90	Thie, Mary Louise
LW65	Schoonmaker, Dottie	LW48	Thies, Dave
LW94	Scott, John	LW74	Tibbott, Seth
LW111	Scott, Virgil	LW86	Upson, Larry
LW63	Sefler, William E.	LW28	Van Der Raay, Brigitta
LW49	Shank, Donald R.	LW115	Van Fleet, Toby
LW41	Short, Thomas O.	LW71	Vranizan, Mary and Ed
LW25	Short, Tom	LW42	Weiss, Robert L.
LW20	Sisson, Richard M.	LW96	Wendell, David
LW117	Slotta, Emily	LW128	White, Bonnie
LW62	Smith, Elizabeth N.	LW26	Woodman, Daniel
LW108	Smith, Laurie	LW59	Yost, Steven

LIST OF GROUPS AND INDIVIDUALS WHO COMMENTED ON THE DRAFT EIS (continued)

INDIVIDUALS WHO ATTENDED THE PUBLIC MEETING IN SEPTEMBER, 1990

GROUP 1

Chamberlain, Greg
Dancer, Danial
Johnson, Lon
Meninick, Jerry
Phelps, Martin
Sandlin, Mike
Scheuner, Alma
Scheuner, Bill
Schuster, Chuck

GROUP 2

Biddle, Gary
Eli, Tommy
Lewis, Edwin
Olson, Luther
Stampfli, Steve
Starr, Jim
Weiler, Bill
White, Daron
White, Dennis

GROUP 3

Baughner, Connie
Blenn, Julie
Ladiges, Jaylin C.
Linn, Dana
Skakel, Nancy R.
Tindall, Jim
VanZandt, Doug

GROUP 4

Childs, Tim
Dahl, Deana
Lamber, Pat
Short, Tom
Sole ~ -Cosia, Oriol

GROUP 5

Barker, Chuck
Barker, Jill
Frank, Leo
Lambert, Jim
Poknis, Paul
Shor, Neva
Wendell, Dave
Zoller, Phil

GROUP 6

Black, Cande
Black, Nina
Mills, Betty
White, Bonnie
Wright, David
Wyels, Lucile

GROUP 7

Chamberlain, Bob
Cross, Laurie
Jackson, Johnny
Singleton, Peter
Sneider, Kathy

GROUP 8

Dempton, Dewey N.
Germeraad, Don
Harvey, Marc
Reed, Bob
Tofoya, Kerry

GROUP 9

Brown, Steve
Clifford, Lenore
Hepher, Etta
Hunsuku, Frank M.
Malanez, Margaret
Zoller, Tracy

GROUP 10

Clifford, Del
Frey, Joan
Kunzer, Robert
White, Nancy
Zoller, Lori

COMMENTS AND RESPONSES

The consolidated comments are presented on the following pages and are grouped under subject headings to facilitate review. The Forest Service

response follows each comment and, where appropriate, shows where in the Final EIS the subject of the comment is discussed.

BOUNDARIES

Comment 1 - Move the lower boundary upstream from Buck Creek to SDS Lumber Co.'s fence. (This would exclude 13 cabins on NW Lake.)

Response - The termini of the segment of the White Salmon River which Congress designated a Wild and Scenic River were stated in the Columbia River Gorge National Scenic Area Act of 1986. One of the criteria for establishing a terminus is to locate it at a good, relatively permanent physical feature which is easy to identify on the ground. Buck Creek is such a feature, while SDS Lumber Company's fence is not. Although minor changes in the termini of a designated river could be made without requiring congressional action, it is not appropriate to delete portions of a river which Congress designated without compelling reasons to do so. To leave out the 13 cabins is not considered a compelling reason, nor has any other compelling reason for moving the terminus upstream been found. In fact, when the boundaries were revised in 1989, the terminus was moved downstream slightly, from Buck Creek to the concrete bridge just above Northwestern Park. This was done because the bridge is a very identifiable physical feature, and having the boundary at that location could make access to the road possible if the existing takeout were to be eliminated sometime in the future.

Comment 2 - Expand the boundaries to include more than the full amount which is authorized in the Wild and Scenic Rivers Act in order to truly protect the natural qualities of the area - to protect biodiversity by allowing for landscape level management of the area that does not preclude potential necessary changes in management in the future.

Response - An alternative with boundaries substantially expanded for the purpose of including more white oak and later successional stages was considered between the Draft EIS and the Final. It has been added to the section "Alternatives Considered but Eliminated from Detailed Study" in Chapter II.

Comment 3 - Work with local residents to decide on individual management areas.

Response - The management plan, including the preferred boundaries, was developed with considerable public involvement, a major aspect of which was a work group of people who are interested in the management of the river area. The group included a number of local landowners. See the description of the public involvement portion of The Planning Process in Chapter I. The Preferred Alternative (Alternative 6) directs the Forest Service, as part of implementing the Management Plan, to consult frequently with a task force which would include several local residents among its membership. In addition, where scenic easements may be needed, the Forest Service will work with the local landowners to assure that projects are compatible with the management direction in the Plan, or to work out specific terms for an easement.

Comment 4 - Further reassessment and alteration of the final boundaries will only serve to create confusion and resentment, and may delay further the final implementation of a sound management plan.

Response - The existing boundaries were established prior to the determination of outstandingly remarkable (OR) values. They are the result of an appeal process which was resolved with the provision that boundaries would be reconsidered as part of the management planning process. The boundaries in the Preferred Alternative are based on criteria which were developed as a result of the planning process. See the criteria for boundaries in the Detailed Description of Alternatives in Chapter II.

Comment 5 - Boundaries should be a set amount (100' or 200') not an arbitrary setback. 200' would be adequate to cover everything you would see.

Response - Boundaries of 200' or less would be too narrow to provide the protection and enhancement of the river's values, which is required in the Wild and Scenic Rivers Act. See the criteria for boundaries of the Preferred Alternative in the Detailed Description of Alternatives in Chapter II.

Comment 6 - There seems to be no topographic or botanical rationale for including within the boundary certain land east of Oak Ridge Road in Section 19, T4N, R11E.

Response - The preferred boundaries eliminate any land east of Oak Ridge Road in Section 19, T4N, R11E.

Comment 7 - Add more of the old Hearn property (east of Oak Ridge Road in Sec. 19, T4N, R11E) to give deer a corridor from woods down to the river.

Response - This area is not included in any of the alternatives. Deer- travel corridors are not one of the criteria used for boundary location. However, there are many areas on the east side of the river where there is continuous forest cover extending to the river. These should provide ample corridors for deer to travel to the river.

Comment 8 - Use the Alternative 2 boundary, except add two specific areas to that boundary. One area (in the SW1/4 of Sec.7, T4N, R11E, between the Alt. 2 boundary and the Oak Ridge Road) includes a complete side drainage vegetated with the last but important piece of Oregon white oak community on the river's east side. The other area (in Sec. 19, T4N, R11E) provides views from the river and Oak Ridge Road.

Response - These areas are not included in any alternative. Although the first area does contain Oregon white oak along a portion of a side drainage, it is more than 1/2 mile from the river, and is not considered to be river-related. There are also other areas on the east side of the river which contain good examples of white oak communities. The lower part of the same drainage is included within the boundary of the Preferred Alternative. The second area is not seen from the river due to screening vegetation along the river, and providing views from Oak Ridge Road is not a boundary criteria in any alternative.

Comment 9 - Protection and stabilization of the watershed would be improved by boundary expansions at BZ Corner, along Oak Ridge Road, and along tributary watersheds such as Spring Creek, Indian Creek, and Rattlesnake Creek.

Response - Although expanding boundaries will usually result in some increase in the level of protection, the amount of increased protection diminishes the farther away from the river the boundaries get. The boundaries at Spring Creek and Rattlesnake Creek are already more than 1/2 mile from the river. Protection and stabilization of the entire watershed is not within the intent of the Wild and Scenic Rivers Act.

Comment 10 - The river corridor should not be a "catch-all" for all concerns. Enlarging the area will not address the concerns.

Response - The boundary of the Wild and Scenic River is established to meet specified criteria. See the Boundaries issue for the Preferred Alternative in the Detailed Description of Alternatives in Chapter II.

Comment 11 - Allow for future boundary adjustments - don't write it in granite. Needs flexibility for individual characteristics along the river.

Response - Future boundary adjustments could be made based on the findings of an environmental analysis and with the concurrence of Congress. The Preferred Alternative explicitly states criteria for boundary adjustment.

ADMINISTRATION

Comment 1 - If we have commissions, task forces, etc., members must be elected by area residents. Members should be voted in for a two-year term.

Response - The overall intent of committee makeup is to have a balanced membership representing a broad range of interests and groups which include local, regional, and national concerns. See the description of Alternative 6 (Preferred) in Chapter II for a list of the interests which would be represented on the committee. The Forest Service would appoint those representatives to the committee, but it would only be after discussions with members of the interests that would be represented. If a formal advisory committee were established, it would have to follow the Federal Advisory Committee Act regulations which limit appointments of members to two years.

Comment 2 - The same committee that manages the Upper White Salmon and the Klickitat Rivers should manage the Lower White Salmon. Entire length of the White Salmon River needs a coordinated management system.

Response - The CRGNSA manager will recommend, through the Upper White Salmon River Study, that if the upper White Salmon River is put into the National Wild and Scenic Rivers System, both upper and lower segments should be managed using the same committee and administrative structure. However, the Forest Service will need to follow congressional direction if the upper river is designated. The Preferred Alternative has a built-in revision process in the event that the upper river is designated, to address management of the river as a whole.

Comment 3 - The county will provide technical assistance to landowners to help them meet the goal and objectives of a joint management alternative. The county also will study and attempt to develop a conservation tax credit program for the benefit of landowners who practice conservation.

Response - Cooperative technical assistance programs in several different areas have been included in the Preferred Alternative.

Comment 4 - Specify who would manage the lands that are acquired and how they would be managed.

Response - Generally, the Forest Service would acquire and manage these lands consistent with the stated objectives and standards in the particular alternative. In some cases, particularly in the

Preferred Alternative, direction for managing specific parcels would not be developed until after inventories of the biological resources have been done.

LAND ACQUISITION

Comment 1 - Adequate federal scenic easement and acquisition monies need to be accumulated for purchases. You can't run this thing right on a shoestring.

Response - Money needed for management of the river, including acquisition, is dependent on appropriation by Congress. See the discussion in the new section on Funding at the end of Chapter II.

Comment 2 - The Forest Service, through the purchase of scenic and conservation easements, can help protect landowners from "surprises" in what property owners can or cannot do with their land. Perhaps, you can find a way to communicate potential outcomes to owners of property with river frontage. As you know, low bank river frontage is valuable and will become more valuable if properly managed and allowed to appreciate to its highest and best use.

Response - The Management Plan provides the basis for how the land along the river should be managed. An educational program will be developed jointly with Klickitat County and Washington State to assemble in one place all the requirements which are in effect along the river. A strong attempt will be made to inform all landowners and others interested in the river about these requirements. Also see the new section on Acquisition in Chapter II, which explains about scenic easements, fee title, compensation, eminent domain (condemnation), etc.

Comment 3 - The Forest Service must compensate fairly landowners whose property rights are restricted or otherwise compromised as a result of management plan implementation in the river corridor boundary.

Response - Fair compensation will be paid for any rights which are acquired by the federal government. See the new section on Acquisition in Chapter II.

Comment 4 - Acquisition needs to be done on a willing seller basis. No condemnation.

Response - See the new section on Acquisition in Chapter II for a discussion of the very limited situations in which condemnation might be exercised.

Comment 5 - Alternative 2 would be a most difficult alternative to implement because the river segment flows across all private lands. In order to implement this alternative, a major federal land acquisition program would be required or local and state governmental units would have to adopt and enforce stringent antidevelopment land use controls.

Response - It is true that if landowners do not voluntarily go along with the management direction contained in Alternative 2, it would require considerable land acquisition and would be difficult to completely implement. See the Detailed Description of Alternatives in Chapter II for a listing of the assumptions used for acquisition in each alternative.

INSTREAM FLOWS

Comment 1 - Improve instream flows by greater retention of rainfall through limitations on timber harvest within the boundaries.

Response - The considered alternatives show a wide range of acreages on which timber harvest could occur within the Wild and Scenic River boundary, with both Alternative 2 and the Preferred Alternative eliminating commercial timber harvest from most of the forested lands. However, streamflows would not be expected to change due to the small percentage of watershed acres involved. This expectation also applies to Alternative 2.

WATER QUALITY

Comment 1 - All alternatives show a decrease or minor improvement in water quality. Would like to see an improvement.

Response - As stated in Chapter IV, Environmental Consequences, management of lands upstream and outside of any potential river boundary under the current Wild and Scenic Rivers Act could potentially have overriding effects on water quality and quantity within the designated reach. There is limited potential of any increase in water quality through different management practices on lands within the lower river boundary. A voluntary, technical assistance program on the Upper White Salmon could improve water quality if adequate funding and cooperation are achieved. If the Upper White Salmon River is included into the National Wild and Scenic Rivers System, implementation of such a program would be more likely.

Comment 2 - How and by whom is water quality going to be monitored and tested?

Response - The Preferred Alternative specifies that a monitoring plan will be developed cooperatively between the Forest Service, State Department of Ecology, and the Underwood Conservation District. This monitoring plan will address the specifics of the who, what, when, and where of water monitoring. A recent water quality grant has been received which has started this process.

Comment 3 - If pesticide contamination is a concern, sufficient and strict laws exist which already prohibit and regulate pesticide movement into surface and groundwater. US Environmental Protection Agency (EPA), as authorized by the Federal Insecticide, Fungicide and Rodenticide Act 9FIFRAO, is responsible for pesticide licensing and use regulations. State licensing, regulation, complaints are the responsibility of the State Department of Agriculture authorized by Revised Code of Washington RCW15.58 and 17.21 and Washington Administrative Code WAC 16-228-162, -164, and -166.

Response - The Land Use Controls section of Chapter III of this Final EIS (Affected Environment) and Section IV of the Management Plan (Appendix E) have been revised to include this information.

FISHERIES

Comment 1 - The Washington Department of Wildlife is responsible for management of the resident fish in the river. They are used to modifying game laws to protect fish populations. Why do we need to stack federal guidelines on an agency that appears to be doing a good job?

Response - The resident rainbow fish population in the designated portion of the White Salmon River has been determined to be an outstandingly remarkable value and the Forest Service has a responsibility to see that the population is protected. The Forest Service intends to cooperate with the state to provide the necessary protection. In developing the Management Plan for the river, the Forest Service must display how the values for which the river was designated will be protected.

Comment 2 - Fisheries is not a very well addressed topic - very weak.

Response - Fish management is the responsibility of state agencies, not the Forest Service. The Forest Service is responsible for managing fish habitat and feels that the level of information in the Final EIS is adequate to assist in making decisions affecting fish habitat for the management plan. Studies completed by the various fish agencies give detailed technical information about fisheries and are referred to in the document.

Comment 3 - Reintroduction of anadromous fish above Condit Dam would have serious impacts to the recreation resource.

Response - There is the potential for increased fishing pressure in the Wild and Scenic portion of the White Salmon if reintroduction occurs. Also, there are Indian treaty rights at Husum Falls to be considered. This will be considered as part of the reintroduction decision making process. It would be reasonable to consider having no recreational fishing for anadromous fish because of the predominance of private land in the corridor. Additionally, the fish managing agencies may want to prohibit sport fishing to increase survival and natural reproduction. The public will have the opportunity to provide this kind of input to the fisheries agencies when the reintroduction decision is made. The Forest Service will work closely with the fisheries agencies during the decision making process to assure existing recreation values and private property rights are adequately addressed.

Comment 4 - The Yakima Indian Nation is committed to the reintroduction of anadromous fish above Condit dam. All planning conducted by the Forest Service should include the potential for reintroduction of salmon and steelhead into the upper watershed. This maximizes use of the aquatic habitat and provides the greatest benefit to the majority of individuals who utilize the river.

Response - The Forest Service recognizes the potential for reintroduction and establishes a process to accommodate it if the decision is made to bring anadromous fish back to the river above the Condit Dam. None of the considered alternatives close any options for reintroduction, and all alternatives, including the Preferred, specify that the Plan will be updated (amended) if it occurs.

Comment 5 - Challenge the belief that anadromous fish ever entered the warm waters of Rattlesnake Creek.

Response - The Preferred Alternative removes the upper part of Rattlesnake Creek from the Wild and Scenic River boundary because of its limited potential to play a role in anadromous fish management. Personnel with the Washington Department of Fisheries have determined that Rattlesnake Creek has limited habitat for coho salmon, but does not have habitat for spring chinook salmon or steelhead, (Phone conversation between Mark Hunter and Jim Hulbert in June 1991). The *Integrated System Plan for Salmon and Steelhead Production in the Columbia River Basin*, July 1991, does not indicate that reintroduction of coho salmon is an option for the White Salmon River.

Comment 6 - Wider boundaries do not benefit fisheries.

Response - The buffer zone provides a relatively undisturbed area of vegetation that would benefit water quality which, in turn, benefits fish. However, it is true that expanding the width of the boundary eventually would result in diminishing returns for fisheries. The FEIS displays a range of buffer widths from 0 to 400 feet and the preferred alternative has a 200-foot buffer, which will adequately protect the existing fisheries.

BIOLOGICAL DIVERSITY**Comment 1 - The biodiversity of the White Salmon should be determined to be an outstandingly remarkable value.**

Response - Due to inadequate information on biological communities in the White Salmon River valley and other valleys with which it must be compared, it is not possible to determine at this time whether or not biological diversity is an outstandingly remarkable (OR) value. In response to this lack of information on which to base a determination of OR value, the Preferred Alternative directs that, until it has been determined whether biological diversity is an OR value, the buffers and all federally-owned lands within the boundary must be managed as if biological diversity is an OR value. See the detailed description of the Preferred Alternative (Alternative 6), in Chapter II, The Alternatives, and the section on Resource Evaluation in Chapter I, Purpose And Need For Action, for a discussion of biodiversity as a potential OR value.

Comment 2 - The Oregon White Oak community should be an outstandingly remarkable value.

Response - The Oregon white oak communities of the White Salmon River valley have been determined not to be an OR value. This conclusion is based on the facts that they are found in many locations in Washington and Oregon, and that they are not river related. See the section on Resource Evaluation in Chapter I, Purpose And Need For Action, for a discussion of Oregon white oak as a potential OR value.

Comment 3 - There is a need to conduct research of the Oak community and biodiversity in general.

Response - The Preferred Alternative provides for studies of biological diversity, including Oregon white oak, in the White Salmon valley and other comparable valleys. See the description of biological diversity in Alternative 6 in Chapter II, The Alternatives.

Comment 4 - The area in the most liberal rivers boundary should have been more carefully ground-truthed for presence of sensitive species.

Response - Agreed. However, the timeline which the Wild and Scenic Rivers Act sets for the development of the management plan did not provide time to do the type of inventories which would have been required. The Preferred Alternative calls for a comprehensive inventory of the wildlife and plant communities which are located within the boundaries.

Comment 5 - The Lower White Salmon River corridor does contain pileated woodpeckers.

Response - The section on Plants and Animals in Chapter III, Affected Environment, has been revised to reflect this.

Comment 6 - An increase in the transient population could disturb wildlife.

Response - Chapter IV, Environmental Consequences, includes this point in its discussion of the effects of recreation use on plants and animals. In addition, the Monitoring Plan in Section III of Appendix E, The Management Plan, includes a provision to monitor recreation use in relation to wildlife protection.

Comment 7 - We are hoping to reintroduce the western gray squirrel here next year. Only a few remain.

Response - The section on Plants and Animals in Chapter III, Affected Environment, contains a discussion of the western gray squirrel. Reintroduction of this squirrel by the Washington Department of Wildlife would be consistent with the management of the Scenic River.

Comment 8 - The Final EIS needs to address the management of late seral stages along the Lower White Salmon River.

Response - The section on Plants and Animals in Chapter III, Affected Environment, addresses the existing situation concerning late seral stages, and the section on Plants and Animals in Chapter IV, Environmental Consequences, describes how late seral stages are affected by each alternative.

Comment 9 - There is the growth of many species of mushrooms on a deep forest floor. You would be surprised how many mushroom clubs there are and ardent students of all ages seeking knowledge of them. New growth and stumps do not have that great variety - in fact, just a few species.

Response - At the present time, we have no information on the mushrooms which grow in the White Salmon River valley. We will be getting more information about them as a result of the biological studies which are planned as part of the Preferred Alternative.

Comment 10 - Page IV-10 of the DEIS gives the impression that a 200' buffer is required for Bald Eagles and a 100' buffer would not be enough for many species requiring large unfragmented lands. Does this refer to residential development only or is it also referring to forestry and agricultural uses? This area needs more explanation.

Response - This refers to the buffer area of "generally undisturbed natural vegetation" in which no new residential, commercial, or other new development activities (including agriculture and forestry) can take place. Current use by bald eagles is limited to transitory foraging, and 200' on each side of the river would be minimally adequate for that use to continue. Use by other species requiring large, unfragmented lands of older forest would also be transitory, such as for travel corridors. A corridor only 100' wide on each side of the river, would be of questionable value for even these uses. This has been clarified in the section Effects on Plants and Animals in Chapter IV, Environmental Consequences.

CULTURAL RESOURCES

Comment 1 - As you are aware, during the treaty negotiations at Walla Walla the Yakima Indian Nation reserved for all times in all lands ceded by them "the right of taking fish at all usual and accustomed places... and of erecting temporary buildings for curing them; together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land." This treaty language was ratified by the

US Senate in 1859. You should recognize treaty reserved water rights and treaty reserved rights and privileges.

Response - The description of rights reserved in the treaty of 1855 has been amended and is included in the Cultural Resources section of Chapter III, Affected Environment. There are no known or implied treaty-reserved, off-reservation water rights of the Yakima Indian Nation on the White Salmon River. If such rights potentially exist, they have not been adjudicated.

Comment 2 - Indian cultural resources, such as the historical dipnet fishery at Husum Falls and the documented campsite on Rattlesnake Creek, should be determined to be outstandingly remarkable resource of the White Salmon Wild and Scenic River. In addition these sites should be viewed as evidence of the outstandingly remarkable characteristics of Indian residence in this watershed. The Husum Falls fishery provided anadromous salmon and steelhead for the subsistence of local Indian people until the construction of Condit Dam destroyed the runs. In addition, we know of tribal elders who recall use of the fish camp on Rattlesnake Creek prior to loss of the runs.

Response - The Forest Service recognizes the overall importance of Indian culture in the White Salmon valley and will identify significant cultural values as outstandingly remarkable (OR) on a site-by-site basis. It has already determined that at least one site within the White Salmon River study area is an OR value. The Forest Service has issued a professional services contract for archival and oral history research to document and preserve the unwritten history of the area. Any site or area determined, through this process, to be a significant American Indian cultural site will automatically be identified as an OR value.

Comment 3 - Boundary expansion protects the Rattlesnake Creek area, which, for a number of reasons, is sacred to the river people and important culturally.

Response - The boundary in the vicinity of Rattlesnake and Indian Creeks is located to include the site which was determined to be an OR value, as well as some of the surrounding area which is also suspected of being culturally important. It will receive further archival and oral history research to assist the Forest Service in managing the area in keeping with its cultural resource values.

Comment 4 - While there is concern for the protection of the ancient burial grounds, it was presumptuous of the Forest Service to assume the Indian people desired the Federal Government to accentuate these ancestral burial grounds, thereby inviting vandalism and souvenir seekers.

Response - The Forest Service is concerned about the need to protect confidential information and avoid disclosure and elevation of sensitive sites to public view. For this reason the location of specific sites has not been identified and the alternative of an on-site cultural center was not given detailed consideration.

Comment 5 - There is a concern for which "culture" is addressed: the area includes cultural and historic sites. Local residents are a valuable cultural resource.

Response - The Forest Service recognizes that "culture" is a human characteristic that is not restricted by its age. The Forest Service has initiated a professional services contract to collect archival and oral history information on the Indian and non-Indian inhabitants and use of the area to recover the oral tradition and history, and to summarize the written record that is now in a variety of locations. The local population is specifically identified as a potential source of information.

Comment 6 - Most significant cultural sites should be protected through acquisition of fee title and/or easement. Sites should be acquired and managed by the Native Americans, not by management authority of the Forest Service.

Response - The Forest Service is acquiring lands that have sensitive resource values. Sensitive and significant sites will be identified for potential acquisition, and additional research is likely to identify other sites that could be acquired. Acquisition by the Forest Service will be pursued when no other entity comes forward, if that is needed in order to protect OR areas or sites.

Comment 7 - The Yakima Indian Nation is concerned that an adequate inventory is conducted in this area on cultural sites. Funding should be provided for the Yakima Indian Nation to participate in an inventory. These cultural resources are of very great value to the Yakima Indian Nation. We are committed to the preservation and enhancement of our tribal heritage and history.

Response - This concern is being addressed through a professional services contract mentioned in Comment 2 above. This research will be done in consultation with the Yakima Indian Nation. The Yakima Indian Nation will be invited as an active participant to coordinate work with the local Indian consultants. The results of the research will be documented and protected in direct consultation with the Yakima Indian Nation.

Comment 8 - Consider cultural resources of the entire White Salmon River valley as a cultural system in its inventory, protection, and interpretation.

Response - In Alternatives 2 and 6 (Preferred), the Forest Service has specifically addressed the need to conduct a comprehensive cultural resource inventory (field, oral history, and archival) for the purpose of evaluating, protecting and interpreting the cultural resources of the area as a cultural system.

Comment 9 - Provide off-site interpretation including a series of interpretive displays.

Response - Each of the alternatives provides direction for interpretation of cultural resources. In each case, sensitive cultural sites would only be interpreted on an off-site basis if that was needed to protect the cultural values of the site(s).

Comment 10 - Survey only on public lands within the boundary, unless private landowners voluntarily allow surveys to be done.

Response - The Preferred Alternative directs the Forest Service to perform on-the-ground surveys on all public lands within the boundary. On private lands, it provides for the Forest Service to request Klickitat County to notify the Forest Service of applications for development activities within the boundary, to require archeological surveys to be done on moderate to high probability areas (at Forest Service expense), and to provide time in their review process for the Forest Service to perform the needed surveys and consult with the landowners (see the Administration Issue of Alternative 6).

Comment 11 - The county doesn't want to see a second level of development review, and does not want the Forest Service to attempt to exercise project approval or denial authority.

Response - The Forest Service would work with the county to develop the process described in the response to Comment 10. Surveys on private land would only be done on sites where there is a moderate to high probability of discovering a cultural resource site. If the Forest Service determines

that stronger action is required for site protection than could be provided through state or county regulations, it would negotiate with the landowner for voluntary changes to protect the values, or, if necessary, protect the site through acquisition. There would be no attempt to exercise approval or denial authority.

WHITEWATER EXPERIENCE OPPORTUNITIES

Comment 1 - I disagree with the lumping together of two different aspects of the boating experience; crowding and naturalness. There is no physical law that says that a natural setting cannot be crowded.

Response - Agreed. The Preferred Alternative reflects this point by providing for a "roaded natural" level of use (low to moderate perceptions of crowding) while still maintaining a "semi-primitive" setting adjacent to the river (moderate to high perceptions of naturalness and isolation).

Comment 2 - The experience is not the world class rapids but the quality of the environment, the serene setting. There are so few areas left that are near a major metropolitan area which provide for a semi-primitive experience that all efforts should be made to maintain those areas.

Response - Chapter III has been modified to clarify these points. The Preferred Alternative maintains the semi-primitive setting of the area adjacent to the river as a major component of the whitewater experience.

Comment 3 - The difficulty of the put-in adds to the primitive nature of the experience.

Response - Chapter III has been modified to point this out. In the Preferred Alternative, the intent is to maintain this current experience, within safety considerations.

Comment 4 - Allowing boating use to greatly increase could pose a hardship on county emergency rescue crews.

Response - Chapter IV, Environmental Consequences, has been revised to address this point.

Comment 5 - Noise level of rafters is a nuisance. Limiting numbers of boaters will minimize conflicts with property owners.

Response - This has been added to Chapter III, Affected Environment. In addition, the Preferred Alternative includes monitoring and managing conflicts between whitewater boaters and landowners, which would include nuisance levels of noise.

Comment 6 - Important to point out that an increase in boaters will not severely affect the physical impacts on the river...increases in use have less and less effect on amount of impact. Therefore, the only serious impact caused by an increase in the number of boaters is a decrease in the feeling of isolation, a feeling that can be achieved much better on other rivers and one that should be given up to allow more boaters to experience the White Salmon.

Response - The point that increases in use have less and less physical impacts is explained in Chapter IV, Environmental Consequences. However, initial surveys have indicated that the majority of river users prefer relatively low levels of crowding (a high level of isolation) on the White Salmon with a preference for not seeing other parties more than 25% of the time. The Preferred Alternative

includes a Limits of Acceptable Change (LAC) process to establish acceptable standards for numbers of boaters. Additional user preference surveys are also being conducted to help guide this process.

Comment 7 - Due to the shallowness of the water, a typical motorboat cannot normally operate above a point approximately one mile above Northwestern Lake (where a water line crosses the river). Making this the motor/no motor boundary would allow traditional downstream use by Northwestern Lake boaters and would provide cabin owners a means of traveling up-current from the lake to their docks.

Response - When Northwestern Lake is full, the pool extends to a point several hundred yards below where the waterline crosses the river. In all alternatives where motorized use is limited, it would be restricted to Northwestern Lake. This would still allow the described uses to continue.

Comment 8 - How do you know when too many people are too many?

Response - Each of the alternatives provides for a different level of whitewater boating use based on different levels of perceived crowding. Studies are being done to determine the relationships between levels of perceived crowding and numbers of boaters. When these studies are completed, a Limits of Acceptable Change process will be used to establish acceptable standards for numbers of boaters. See the Detailed Description of Alternatives and the discussion of the Limits of Acceptable Change Framework, both in Chapter II.

PERMIT SYSTEM

Comment 1 - A major issue for many private boaters is that of NOT wanting a permit system to limit the number of boaters. Other management options to control use must be stressed.

Response - The Preferred Alternative states that a permit system will not be established unless other methods of limiting use are unsuccessful in practice. The Preferred Alternative also limits the development of facilities, including additional launches and other river accesses, to retain the river's ability to be "self-limiting."

Comment 2 - Largest group of boaters during peak periods are outfitters. This group also has the greatest potential for rapid growth in the near future. Outfitters have the ability to promote and publicize the White Salmon River. Therefore, to manage growth, need to limit the number of commercial outfitters and restrict to those that have made regular trips on the river.

Response - The Preferred Alternative does limit the number of outfitters/guides to ten, the number who have been under special use authorization beginning in 1990 when the system was first implemented on the river.

Comment 3 - Give priority to local guide services who are experienced on the river and who mainly depend on it for their livelihood.

Response - The Preferred Alternative limits the number of outfitter/guide special use permits based on historical use and performance, as well as geographic distribution. Based on these criteria, the current local guides, whose livelihood depends on the lower White Salmon, should be able to continue to provide quality services to the public in running the White Salmon.

Comment 4 - If the permit fee is too expensive it could eliminate present commercial users (grandfather clause would protect).

Response - A standard, nationwide fee schedule for commercial outfitters/guides has been established by the Forest Service. It has been in effect on the lower White Salmon River for the last two years, and applies to all commercial guides. This fee schedule does not appear to have eliminated commercial users who have historically had substantial use on the White Salmon.

Comment 5 - Group of commercial rafters should get together with Forest Service for input on river rafting and permit needs.

Response - The Preferred Alternative includes at least one annual meeting with representatives of the various groups using the river.

SAFETY

Comment 1 - Don't like shooting at or across the lake.

Response - Almost all of Northwestern Lake is outside the Wild and Scenic River boundaries, and the Forest Service has no authority to address shooting outside the boundaries. However, the discharge of firearms across the White Salmon River upstream from the bridge at Northwestern Lake has been addressed. The Preferred Alternative states that the county, state, and Forest Service will develop a protocol to address, among other things, the discharge of firearms across the river.

Comment 2 - There is no history of any drownings along the specific area of the river under study (EIS).

Response - The Draft EIS states that one boating death has occurred on the river, above the normal launch point. In the Spring of 1991, another boating death occurred just below the launch point in very high water conditions. There has also been a report of one other boating death, below Husum, shortly after WW II. Chapter III, Affected Environment, has been revised to include this information.

Comment 3 - There is a concern for safety at the river access at Husum Falls area. The concern is with the speed of traffic along the highway and conflicts with pedestrians, boaters, and sightseers at the falls. Consider caution light and speed restrictions in potential accident areas.

Response - The Affected Environment, Chapter III, identifies this situation in Husum. It has also been listed as an issue in Chapter I. This issue is addressed in the Preferred Alternative by coordinating with the state and county to reduce the highway hazard at Husum.

RECREATION INTERPRETATION AND INFORMATION

Comment 1 - Much of the public traffic can be diverted away from the so-called isolated parts of the river with an information center or museum at Husum and/or BZ Corner.

Response - The Preferred Alternative provides for an interpretation/information facility at Husum. See the section on Recreation Interpretation/Information in the Detailed Description of Alternatives in Chapter II and the Effects on Recreation section in Chapter IV.

TRAILS

Comment 1 - The following comments describe anticipated effects from trails:

- Trails would enable non-boating recreationists to appreciate and learn about the White Salmon River's natural values, which would better lead to their protection.
- Walking in a deep forest can be a deep spiritual experience. The forest along the river is a wonderful place for quiet thinking without the noise of machines.
- Trails have to be maintained.
- There are lots of trails up Buck Creek, and very few people use them now. Trails proposed in the area won't get much use.
- Because distances are so short in this area, it would take only a short walk to get from the car to the river. Increased river access will bring too many people to the riparian zone, which will cause picking of flowers, proliferation of litter, degradation of water quality, etc.
- Increased trail access will cause confrontation between hikers and resident property owners. Property owners are already concerned over their legal liability, vandalism issues, and general visitor impact.

Response - Portions of Chapter IV, Environmental Consequences, have been revised to include these effects where appropriate.

Comment 2 - A bike path is greatly needed from BZ Corners to White Salmon and Bingen. More and more people are biking Hwy. 141 which is dangerous in places. A path away from the highway would be ideal for scenic and health values. A bike path may help cut down on traffic which is beginning to be a problem on 141.

Response - Chapter III, Affected Environment, and Chapter IV, Environmental Consequences, have been revised to include this information.

Comment 3 - We urge that Alternative 2 be modified to include the construction of low-impact trails that would permit and encourage public access without disturbing the privacy of local residents.

Response - This is a small modification of Alternative 2, and would be a viable new alternative. However, a low impact trail system is already included in some of the other alternatives (see the Detailed Description of Alternatives in Chapter II). Since it is not possible to create and study the very large number of possible combinations which could be made by combining all the different parts of the existing alternatives, and since this modification would consist of parts which are already included within the full range of alternatives, (and is not the Preferred Alternative), this new alternative was not studied.

DEVELOPED RECREATION FACILITIES

Comment 1 - Potential adverse impacts of increased recreation upon sanitation, i.e., solid waste collection and disposal, restroom facilities, and potable water supply, should be identified and appropriate mitigation to minimize impacts should be briefly addressed in the final document.

Response - The Effects on Water Quality and Quantity section in Chapter IV has been revised to better address these concerns.

Comment 2 - Do not allow overnight recreation areas as such usage would have an adverse effect on wildlife, which seems to be coming back.

Response - The Effects on Plants and Animals section in Chapter IV has been revised to address this concern.

Comment 3 - Need a ramp for paraplegics at Husum Falls, behind the State scale.

Response - The Preferred Alternative provides for a put-in near Rattlesnake Creek which is useable, with assistance, by a person with a disability. See the River Access portion of the Recreation section in the Detailed Description of Alternatives in Chapter II.

Comment 4 - Develop more fishing sites.

Response - Resident fisheries were determined to be an outstandingly remarkable value of the White Salmon River. Therefore, management of the river must protect and enhance that value. Since fishing is expected to have an adverse effect on the resident fisheries, all alternatives recommend that the State of Washington adopt strong harvest regulations. None of the alternatives provide for the development of fishing sites.

Comment 5 - We favor the addition of recreational roads to scenic viewpoints and trailheads, suitable for ordinary passenger cars. There is a large body of travelers, many of them aging wilderness hikers who still seek out scenic roadways and easy trails. Many young families with children enjoy visiting scenic places and short trail hikes. It is wrong to limit these people to the brief glimpses they can get from the highway.

Response - One of the unique aspects of the White Salmon River is that, once on the river, it seems very isolated from the highway, fields, and buildings which are, in actuality, so close. This feeling of isolation from the outside world is one which the Preferred Alternative would attempt to maintain. However, the Preferred Alternative specifically calls for the provision of viewpoints from which the river can be seen at places where facilities are already present - BZ Corner, Husum, and Northwestern Lake.

Comment 6 - In Alternatives 3-5, high impact recreational development destroys natural beauty and values. These Alternatives lead to crowded, extremely low quality recreational facilities.

Response - Crowding is not a function of the amount of facilities, but of the relationship of the capacity of the facilities to the number of recreationists using them. Similarly, quality has more to do with design, construction, operation, and maintenance of the facilities than the amount of facilities. The effects of the proposed facilities on natural beauty and other natural values are discussed in Chapter IV, Environmental Consequences.

OTHER RECREATION USES

Comment 1 - Establish a recreation user fee. Identify certain areas and have user fees plus a discounted local pass.

Response - The Forest Service is not authorized to establish a user fee in this type of situation.

Comment 2 - Debris and evidence of human waste is already evident in some areas of the White Salmon River. This is an increased insult to our care of the land and is an additional disturbance to our privacy on the river which is already disturbed far too much!

Response - The discussion on Recreation in Chapter III, Affected Environment, has been revised to strengthen these points.

CHARACTER AND SCENERY OF THE RIVER CORRIDOR

Comment 1 - The scenic character of the White Salmon River is very natural looking, spectacular, and unique, especially where the gorge walls are steep. Why not preserve this wonderful value by keeping the river corridor as natural as possible?

Response - The description of Landscape Character in Chapter III, Affected Environment, has been revised to better state this information.

Comment 2 - If the opportunity to manage timberlands outside the narrow buffer is retained, the gradually evolving changes in natural character when viewed from area highways are fully consistent with the existing mosaic of land uses in the area. Indeed, this mosaic of farm, timber, and other uses are what presently make up much of the beauty and esthetic character of the area.

Response - The section on Effects on Landscape Character in Chapter IV, Environmental Consequences, has been revised to more clearly present this information.

Comment 3 - Unsightly raft access operations should not be allowed, nor should signs be allowed if they are visible from the river.

Response - Since whitewater recreation is one of the outstandingly remarkable values for the White Salmon River, limited launch facilities for rafts and other watercraft are provided for in all alternatives. See the sections on River Access in the Detailed Description of Alternatives in Chapter II. The Preferred Alternative prohibits most signs within the buffer.

Comment 4 - Protect scenic resources visible from the river, the canyon perimeter, and Hwy. 141 by requiring development review of structural alterations or additions to existing residences and farm buildings, road or driveway improvements, and river access facilities; by reviewing timber management plans in the corridor; and by limiting the use of pesticides and herbicides in agricultural and forest management in the corridor.

Response - The Forest Service does not have authority to require development reviews or control development, timber management, or use of pesticides and herbicides, on private land. The Forest Service can control these activities only through acquisition of those rights from the landowner, either in fee or through scenic easements. Some amount of acquisition is included in each alternative. For the range of controls on development activities within the alternatives, see the Detailed Description of Alternatives in Chapter II. For the estimated amount of acquisition in each alternative, see Figure II-1, Outputs and Effects Table, in Chapter II, The Alternatives.

Comment 5 - Flowers, potted plants, and even grass lawns (of the cabins at NW Lake) enhance the "scenic" aspect of the White Salmon River.

Response - Although this view is probably shared by some, most people have expressed the view that the area seen from the river should be maintained in a reasonably natural condition. This is also a requirement for management of a Wild and Scenic River. Therefore, an alternative which promoted manipulation of the natural scenery in this way was not studied.

BUFFERS

Comment 1 - We urge adoption of a buffer zone range of 25 to 100 feet.

Response - A buffer of as little as 25 feet would not maintain conditions which meet the requirements for management of "scenic" rivers; so this alternative was not studied in detail. Buffers in the range of 50 feet to 100 feet are included in several of the alternatives.

Comment 2 - The following comments propose establishing a variable width buffer which is different than the one in Alternative 5:

- The best buffer is one that varies in distance from the river as far as necessary to reasonably protect the river.
- The largest buffer (400') is excessive - 200' is generally sufficient but may need to be larger in some areas to protect scenic qualities and biological diversity. At a tributary, most of the tributary probably should be in the buffer zone in order to protect water quality.
- Although there are places for which a lesser buffer zone might be adequate, there are many stretches for which less than 300' or 400' simply would not afford adequate protection.

Response - There are beneficial effects to a variable width buffer (as described in the next comment). However, since these suggested buffer widths are generally within the existing range of alternatives in the DEIS, a new alternative was not studied.

Comment 3 - With a variable width buffer, as outlined in Alternative 5, each parcel along the river could be evaluated individually for visual impact and water quality degradation. This would be as little impact on the private landowner as possible. A fixed distance will mean that quite a lot of the land will be restricted from landowner use unnecessarily.

Response - These are good points. However, as pointed out in the response to the next comment, there are other reasons for establishing a buffer, including maintenance of plant and animal diversity and providing travel corridors for wildlife (see the Plants and Animals section of Chapter IV, Environmental Consequences, for an indication of the effects of different width buffers). For these purposes, a fixed-distance buffer is more appropriate. In addition, some landowners preferred a fixed-distance buffer as it would be easier to locate on the ground and to know what restrictions applied where.

Comment 4 - Buffer width should be variable depending on what can be seen from the river. Why do we need to impose restrictions on areas we can't see?

Response - Buffers serve other purposes in addition to visual screening. For instance, they protect riparian areas, help maintain plant and animal diversity, provide travel corridors for animals, and, through setbacks of buildings and septic systems, help maintain water quality.

Comment 5 - If, at some time in the future, it were deemed necessary to decrease the buffer zone, it could be done without a problem, but to restore the zone to its natural state once it has been destroyed presents endless problems.

Response - The buffer zone now is not in a natural state. Much of the timber in the White Salmon River valley was harvested around the turn of the century, and many areas were planted to apple orchards. In addition, there is speculation that, before the coming of the Euro-Americans, either natural fires or fires set by the indigenous people played a key role in maintaining the Oregon white oak and ponderosa pine as the dominant tree species, even though they are not the climax species in most of the area along the river. Even so, much of the buffer is presently reverting back to a more natural condition. This condition does leave more options for future changes than if, for example, the edge of the river were fully developed with houses.

Comment 6 - In the 200'-400' portion of the buffer, include uneven age timber management (following principles of "New Forestry" as outlined by Jerry Franklin's work or Brigetta Van der Raay of Trout Lake, MS thesis, U. of Washington) and include agriculture practices that utilize only chemicals that leave no residues that would contaminate the buffer area or the water.

Response - The intent of the buffer, in all alternatives, is to provide a strip of essentially undisturbed natural vegetation adjacent to the river. Its purposes include providing a development setback so water quality is maintained, protecting riparian vegetation, providing a generally natural appearing shoreline, providing visual screening of upland developments, providing a travel corridor for wildlife, etc. The width of the buffer varies among the alternatives to be able to assess the effects of those changes. Although the proposal to incorporate the principles of "new forestry" in the portion of the buffer between 200' and 400' in Alternative 2 is a valid proposal, creating a whole new alternative just to study those effects was not done. None of the alternatives allows use of agricultural chemicals which would contaminate the buffer or the water.

ROADS AND BRIDGES

Comment 1 - Wild and scenic designation should not preclude any state highway improvements needed in the future.

Response - In all alternatives except Alternative 1, there is some restriction on the construction of new roads and bridges, but existing roads and bridges may be maintained or replaced in the same location (see Detailed Description of Alternatives in Chapter II). If state highway improvements are needed, a cooperative planning process would be used to assure that the needed improvements are made while meeting the intent of the Wild and Scenic Rivers Act and the management plan.

ORCHARDS AND OTHER AGRICULTURE

Comment 1 - From the standpoint of adequately addressing the impact on our orchard operation and the orchard operation's impact on the river corridor, the facts were poorly researched and poorly stated. Your orchard information in the DEIS is incomplete and not adequately conclusive.

Response - Additional information has been obtained on the orchards within the boundary. Appropriate sections of Chapter III, Affected Environment, and Chapter IV, Environmental Consequences, were revised to include the new information.

Comment 2 - It is silly to force the removal of orchards from the buffer area. There is only a small portion of the river where any orchard can be seen. These trees do nothing to diminish the quality of the float. Unless it can be shown pollutants from the orchards materially affect the river, leave them alone.

Response - Alternative 2 is the only alternative in which agriculture is phased out of the buffer. The other alternatives have been revised to explicitly state that agricultural uses may continue in the buffer unless agricultural chemicals or erosion cause adverse effects to water quality.

Comment 3 - Need restrictions on pesticides. Use integrated pest management practices to avoid chemical spraying if this is truly the best environmental process.

Response - The Preferred Alternative encourages the use of integrated pest management where it can be used successfully, thereby reducing the dependence on pesticides.

Comment 4 - Provide equal access to land use opportunities for all land owners - do not regulate by percentages.

Response - The Preferred Alternative does not include the concept of allowable percentage change between different categories of land uses.

FORESTRY

Comment 1 - Allow no timber harvest.

Response - The federal guidelines for management of wild and scenic rivers say that "Agriculture and forestry practices should be similar in nature and intensity to those present in the area at the time of designation....Timber harvest may be practiced in recreational and scenic river areas....Timber harvest in any river area will be conducted so as to avoid adverse impacts on the river area values." Based on this direction, timber harvest, at some level, has been allowed in all alternatives.

Comment 2 - Probably the single largest destructive device for any waterway in the Pacific Northwest is clearcuts. They destroy not only scenic values, but muddy the river and significantly reduce the water flow. Reduce or eliminate clearcutting.

Response - Clearcutting is precluded only in Alternative 2. Clearcutting is a standard forestry practice that, if carefully located and properly done, has little effect on scenic values and water quality. In some situations, clearcutting can be used effectively to actually increase water flows. In the Preferred Alternative, most of the forest land would either become federal lands (through exchange with SDS Timber Company), or be included within the buffer. In these areas very little timber harvesting at all would occur, and clearcutting would only be done, if at all, to meet some other management direction, such as facility construction, maintenance of biological diversity, etc. The remainder of the forest land within the boundary is in relatively small parcels and is owned by a number of different landowners. Clearcutting on these parcels, done in accordance with state forest practices regulations, is expected to have little adverse effect.

RESIDENTIAL/COMMERCIAL DEVELOPMENT

Comment 1 - There should be no more than minimal frontage foot requirements on properties suitable for residential development along the River - 100' per parcel with a 1-2 acre density provision.

Response - The requirements for frontage on the river or buffer range from a low of 100 feet to a high of 1,320 feet. Minimum lot sizes vary from ½ acre to 40 acres. See the Residential and Commercial Development section of the Detailed Description of Alternatives in Chapter II.

Comment 2 - Consideration should be given to land owners who only have building sites on the river.

Response - Construction of new residences is not allowed in the buffer in any alternative. In alternatives where the buffer is wide, this could eliminate any house from being built on property where the only suitable building site is adjacent to the river. If this happens, the Forest Service would have to buy the property or development rights and pay the fair market value. (Fair market value would be paid for any rights the Forest Service purchases from private landowners.)

Comment 3 - Allow no conditional use permits other than for agriculture or timber purposes (no golf courses, airstrips, etc.). Would like protection from airstrips within the Alt. 2 boundary.

Response - Conditional uses are activities specified by the county zoning ordinance which, when authorized by the board of adjustment and subjected to reasonable conditions, are considered to be compatible with the existing and potential uses in the vicinity. Conditional uses are not authorized by the Forest Service. If the county authorizes a conditional use within the boundary that is not consistent with the management plan, the only way the Forest Service could change or prevent it would be to purchase the property or development rights and pay the fair market value. See the description of Alternative 6 (the Preferred Alternative) in Chapter II, The Alternatives, for uses which are restricted or not allowed in the Plan. Airports and airstrips are not allowed in the Preferred Alternative.

ZONING REGULATIONS

Comment 1 - There is a question about the involvement of the Forest Service in land-use matters outside the boundary. This is the wrong planning process for addressing such issues and concerns. The County can meet the challenge of maintaining the rural character of the lower White Salmon River Valley. The County has already updated its Shoreline Management Plan, and now has initiated a comprehensive sub-area plan update for the entire river valley.

Response - Included within the issues identified for the White Salmon River is maintenance of the rural, pastoral scenery of the White Salmon River Valley. Since much of that scenery is located outside any potential boundary of the Wild and Scenic River, alternatives were studied which encourage the county to modify their land use plans to provide greater protection for the scenery outside the potential boundary. The Preferred Alternative takes the approach of supporting the county in the purposes and intents for this area as stated in the Klickitat County Zoning Ordinance. See the Detailed Description of Alternatives in Chapter II.

Comment 2 - The County is sensitive to the "taking" issue and is reluctant to use county land-use controls to help the Forest Service meet its management direction.

Response - The Forest Service does not intend that the county use its land-use controls in support of the wild and scenic river management plan to the extent of it being a taking. The intent in several of the alternatives is that where the interests of the county, as stated in the County Zoning Ordinance and Shoreline Master Plan, converge with those of the Wild and Scenic Rivers Act, the county controls should be strengthened if that helps meet the intent of the County Zoning Ordinance. The approach, as stated in the Preferred Alternative, is one of supporting the county in the purposes and intents for this area as stated in the Klickitat County Zoning Ordinance. See the Detailed Description of Alternatives in Chapter II.

Comment 3 - The Forest Service would do well to promote and support development of community water and sewer in the Husum-BZ Corners area.

Response - This is a two-edged sword. If community sewer systems are developed in the rural centers of Husum and BZ Corner, the potential for water quality degradation of the White Salmon River from existing and future residential septic systems would be reduced. On the other hand, if either a community water system or sewer system is developed for these rural centers, residential housing density could be significantly increased, probably more than doubled. This would not only increase the number of residents in the area, it would also increase pressure for development of other types of facilities in the area, both of which could have adverse effects on perceptions of isolation experienced along the White Salmon River. The Preferred Alternative includes providing technical assistance to help these communities develop water and sewer systems. See the Detailed Description of Alternatives in Chapter II.

JOBS

Comment 1 - One of the factors which should affect decisions on the river is the local employment situation. Any changes should give priority to protecting local jobs.

Response - The effects on jobs is one of the factors which is described in the section Effects on Socioeconomics in Chapter IV, Environmental Consequences.

Comment 2 - Preference should be given to those commercial river rafters now operating on the River. They have invested much time and money building their business to the level that can support their families. Growth of commercial rafting should not occur such that no rafting outfit can make a decent living.

Response - The Forest Service cannot show preferential treatment to specific commercial guides. Some alternatives, including the Preferred, limit the total number of commercial guides which can operate on the river. In the Preferred Alternative, the guides receiving permits would be determined using the criteria specified in the Detailed Description of Alternatives in Chapter II.

Comment 3 - I recognize the need for Forest Service sensitivity to the timber industry, but three jobs should not make the difference between adequate and inadequate protection.

Response - The change in jobs, in the timber industry and elsewhere, is only one of the many factors considered in trying to arrive at a sound management plan which meets the intent of the Wild and Scenic Rivers Act.

Comment 4 - The issue of economic impacts to agricultural and forestry related jobs may be misleading. The economic pressure to develop the White Salmon River area for residential and commercial uses will increase dramatically in the near future which will result in the conversion of existing agricultural and forest lands to those uses. Therefore, it is unlikely that these jobs will be sustained under any of the alternatives.

Response - If pressure for residential and commercial development of the White Salmon River valley increases, as is expected, the long-term effects are probably as stated in the comment. The land in question falls within the Resource Lands Zone of the Klickitat County Zoning Ordinance. If this zoning ordinance is enforced, it will be many years before the land is so fully developed that the agriculture and forestry jobs will be lost. See the description of the Zoning Ordinance in the Land Use Controls section of Chapter III, Affected Environment. Appropriate sections of Chapter IV, Environmental Consequences, have been revised to reflect these effects.

ECONOMICS IN GENERAL

Comment 1 - Property values will increase if they are included in the boundary.

Response - This is not clear. On one hand, based on experience in other areas designated by Congress, values for residential properties will probably rise. Two main reasons for this are: 1) due to restrictions on development, densities, etc., the land within the boundary develops an assurance that attractive environmental amenities are likely to remain, and 2) the reductions in density results in fewer parcels being available for purchase, and this scarcity, particularly of environmentally attractive property, tends to drive up prices. On the other hand, lands which cannot be developed for residential or commercial uses, where forestry or agriculture are the only possible uses, should not increase in value. This discussion has been added to Chapter IV, Environmental Consequences.

Comment 2 - Clarify effect on property taxes (values).

Response - It is not clear what the effect would be on individual property taxes. If an individual landowner sold the Forest Service a scenic easement, and if an actual reduction in the value of the property occurred (judged by market sales of similar properties) as a result of the sale, the landowner's taxes would be reduced since they are based on property values. If there was no reduction in value, there would be no reduction in taxes. On a countywide basis, property acquired by the Forest Service would come off the county tax rolls. This would be offset, to some extent, by: (1) payments to Klickitat County from the National Forest receipts 25 percent fund (The 25% Fund Act of 1908), which makes payments to counties based on National Forest lands located within the county, and (2) PILT (Payments in Lieu of Taxes) revenue paid to the county which is based in part on the total amount of federal acreage within the county. See the new discussion on Land Values and County Revenues in the Effects on Socioeconomics section in Chapter IV, Environmental Consequences. In both the individual and countywide cases, if the result is a lower total income for the county with no corresponding reduction in county costs, the tax burden would be shifted to those people who are still paying taxes.

Comment 3 - Concerned about continual erosion of tax base - need to keep as much in land base as possible.

Response - See response to comment 2, above.

Comment 4 - There should be a tax deferral benefit to owners of private land on which rights are reduced because agencies have bought scenic easements.

Response - Presently there are tax deferral benefits available to land owners, through the county, if they enroll their lands in one of the current use tax programs for agricultural lands, timber land, or open space. However, once the landowner sells these rights, that landowner can no longer keep these lands in one of the programs and receive the tax benefit. If a scenic easement is sold, several things can happen: 1) the land owner would immediately receive the market value of the rights which were sold, 2) if the land had been enrolled in one of the current use tax programs, any required back taxes, interest, or penalties for taking the land out of the program would have to be paid, and 3) the amount of property taxes the owner would have to pay would depend on whether the actual property value goes down, up, or stays the same.

Comment 5 - The Board recognizes the area's economy is in transition from one being largely dependent on resource extraction (logging and lumber milling) and commodity sales (logs, lumber, and fruit) to one of embracing recreation and tourism as legitimate economic components.

Response - This point has been added to the Socioeconomics portion of Chapter III, Affected Environment.

Comment 6 - There is an error in land values based on 1980 appraisals - not reflective of current values and subsequent economic effects of DEIS.

Response - This has been changed in the Socioeconomics section of Chapter III, Affected Environment. The county median house value (III-52) is estimated to be about \$45,000 in 1991. The average assessed value in the current management boundary is estimated to be about \$30,000.

Comment 7 - From the standpoint of adequately addressing the impact on our orchard operation and the orchard operation's impact on the river corridor, the facts were poorly researched and poorly stated. Your orchard information in the DEIS is incomplete and not adequately conclusive.

Response - Appropriate sections of Chapter III, Affected Environment, and Chapter IV, Environmental Consequences have been revised to reflect new information provided by the manager of Mt. Adams Orchards Company.

Comment 8 - The tone is that Alternative 2 would cause great reductions in timber harvest and established agriculture uses, leading to significant impact on lifestyles of local residents. These comments completely ignore the potential threat of the conversion of these timber and agricultural lands to residential and commercial development, and assume that "status quo" will be maintained in this area forever. Alternative 2 would eliminate the majority of the potential residential and commercial development and, therefore, offers the best long term protection of these resource lands and would cause the least social/economic disruption (jobs/lifestyles).

Response - The direct effects stated in Alternative 2 are short term and, although somewhat overstated in the Draft EIS, generally are considered to be accurate. The wording has been revised somewhat to reduce the stated significance of the effects. The long-term effects of existing trends, which would be most apparent in Alternatives 1, 4, and 5, were not described. Since this comment is probably an accurate estimation of the long-term effects of current land use regulations, appropriate sections of Chapter IV, Environmental Consequences, have been revised to reflect this information.

OUTSTANDINGLY REMARKABLE AND OTHER VALUES IN GENERAL

Comment 1 - The long-term encroachment of residential and commercial development along the River is, in fact, the single worst scenario for the future of the lower White Salmon because it will likely degrade and potentially jeopardize the outstandingly remarkable values that make it a national wild and scenic river. Alternative 2 would provide the best foundation for enhancement and protection of the White Salmon River's outstandingly remarkable values.

Response - The Wild and Scenic Rivers Act requires that wild and scenic rivers be administered so that the outstandingly remarkable values are protected and enhanced. Of the the alternatives studied in detail, Alternative 2 probably would do that best. However, the Act also says that, consistent with protection and enhancement of the outstandingly remarkable values, other uses that do not substantially interfere with public use and enjoyment of those values should not be limited. With the exception of Alternative 1, all of the alternatives are judged to balance enhancement and protection of the outstandingly remarkable values with allowing other uses to continue, to the degree that they meet the intent of the Wild and Scenic Rivers Act.

Comment 2 - Alternative 2 affords the most protection for the Yakima Indian Nation's interests.

Response - The interests of the Yakima Indian Nation have been important considerations throughout the development of the management plan. Most alternatives provide for some level of studies and inventories of the cultural resources of the area. Alternative 6 (Preferred) provides that any cultural site determined to be significant will be given the status of outstandingly remarkable value.

Comment 3 - The White Salmon area seems unique and beautiful, not just the actual rock canyon, but the entire area.

Response - Although the scenic beauty of the canyon and the pastoral landscape were recognized, they were not judged to be so unique or exemplary as to be an outstandingly remarkable value.

Comment 4 - Since the Congress found this stretch of the White Salmon River to possess sufficient outstanding qualities to designate it outright, the Management Plan Alternative chosen should lean toward maximum feasible rather than minimal protection.

Response - The Wild and Scenic Rivers Act clearly calls for protection and enhancement of a designated river's outstanding values. It also clearly says that other uses, which do not substantially interfere with use and enjoyment of those outstanding values, should not be limited. This seems to call for a balance, rather than either maximum feasible or minimal protection.

PLANNING PROCESS

Comment 1 - The five alternatives developed are unnecessarily rigid in their approach. Suggest borrowing certain concepts from amongst the five alternatives, as well as adding some additional protections as yet not included in any alternative.

Response - Agreed. This was the approach used between the Draft EIS and Final EIS to develop the Preferred Alternative.

Comment 2 - The plan for the White Salmon should not be a static management strategy. It should fully meet the objectives to maintain the OR values of the river, and should have the long-term flexibility to adapt to changing conditions without foregoing OR qualities.

Response - The Preferred Alternative requires review and revision within a 10 to 15-year period following approval of the plan. Also, an update of the plan, if reintroduction of anadromous fish is decided, is part of all alternatives considered other than the No Action alternative. Revision of boundaries and adding biological diversity as an additional OR value (if supported by future studies) have also been built into the Preferred Alternative, as well as a revision, if needed, to address management of the entire river, in the event that the upper river is designated into the National Wild and Scenic Rivers System.

Comment 3 - If what seems like too much restriction still seems so in the future, it will be possible - but deliberately not easy - to correct that error in the future. But if protection is too lax, the poorly protected values soon will be lost forever!

Response - The greater amount of options maintained as a result of foregoing development has been added to appropriate sections of Chapter IV, Environmental Consequences.

ADEQUACY OF THE DOCUMENTS

Comment 1 - Although mitigation possibilities are identified that would minimize adverse impacts (Intergovernmental Resource Center, 1988), the DEIS fails to elaborate on the likelihood of these measures ever being implemented. We emphasize the importance of facilitating the implementation of identified mitigative measures, including the strengthening of community zoning regulations.

Response - The estimated probability that identified mitigation measures would be implemented has been added to all sections on mitigation (Chapter IV, Environmental Consequences).

Comment 2 - There is one Military Training Route (MTR) which should be addressed in the documents. The route center-line crosses near the town of Bingen, WA, roughly from north to south. The route corridor is four miles from either side of this center-line and has a minimum altitude of 500 feet above the ground. It is part of the affected environment and should be addressed in the environmental analysis.

Response - Information on this Military Training Route has been added to Chapter III, Affected Environment.

Comment 3 - The EIS should include a listing of objectives and the order of priority accorded to them for each alternative and an indication of the criteria you will be using in reaching a decision on the preferred alternative, based on how well that alternative satisfies these criteria.

Response - A list of objectives is included on page I-4 of the DEIS. These are fairly general and cannot be used in a mechanical way to arrive at a decision on the preferred alternative. The rationale for selection of the final alternative is included in the Record of Decision.

Comment 4 - Dismayed to see the loss of six timber jobs listed as a "significant reduction."

Response - The wording in The Summary of Effects table has been modified to more accurately describe the expected magnitude of the effect.

Comment 5 - The treaty rights statements on pages S-4 and ApC-4 do not include the Yakima Indian Nation's right for their fishermen to take fish above the Condit Dam. The Yakimas reserved this right in their 1855 treaty, recognized by the federal government. Therefore, the Yakimas' right to take fish above Condit Dam should not be questioned, but rather obliged in the EIS.

Response - The wording in those two sections has been modified to more clearly state the treaty rights reserved by the Yakima Indian Nation.

Comment 6 - Two of the draft river alternatives are no longer valid options due to resource removal at the historic Weldon Wagon county trailhead. Alt. 2 and 5 of the DEIS matrix propose to "enhance or protect outstanding resource values for the White Salmon River." It is difficult to comment on alternatives that are being eliminated before the public can comment.

Response - Although the small amount of timber harvest which was done near the county's Weldon Wagon Road Trail does change the existing environment in that area, it does not invalidate Alternatives 2 and 5. The federal government does not have the authority to control anything which takes place on private land without purchasing the rights to do so. Until the management plan is approved, the Forest Service would only step in to prevent actions within the boundary which would have severe negative effects on wild and scenic river values.

Comment 7 - There is no Takings Implication Analysis (TIA) contained within the DEIS and it therefore fails to comply with an absolute legal requirement. The DEIS clearly meets the threshold definition of "policies that have takings implications," for which TIA's are required. Adoption of any alternative, must be preceded by an appropriate TIA which is then subject to public review and comment. The Forest Service should revise and re-issue the DEIS with the necessary TIA analysis.

Response - It is the opinion of the Office of General Council of the U. S. Department of Agriculture that the plan for management of the White Salmon River, as a study or planning activity, is specifically excluded from the need to perform a takings implication assessment (TIA) required under Executive Order 12630 and Attorney General Guidelines. Further, even if the Forest Service decides to do a TIA, it would not be shared with the public and no public comment would be received on it because the legal analysis and opinions expressed in the TIA are part of an ongoing deliberative process and, as such, are exempt from disclosure required in the Freedom of Information Act.

Comment 8 - A proposed action has not been identified. Without an identified proposal, a determination that the analysis adequately addresses potential impacts cannot be made. The lack of a full management plan associated with a clearly identified proposed action may limit effective public review opportunities. It is difficult to determine the full scope of direct and indirect impacts without knowing how existing and potential additional federal lands would be managed. It is assumed that the river plan will be the guiding comprehensive plan providing direction for all significant resource programs. It is therefore recommended that a revised draft plan/EIS be published with a clearly defined proposed action/management plan to provide a complete and accurate analysis for public review and comment.

Response - The first paragraph on page II-2 of the DEIS states that "Preparation and adoption of a comprehensive management plan for the designated section of the White Salmon National Scenic River is what created the need for this EIS, so that is the 'proposed action.'" The DEIS displays four alternative proposals each of which provides comprehensive direction for management of the river area, plus a "No Action" alternative which would allow the river area to continue to evolve without benefit of a coordinated, comprehensive plan prepared by the Forest Service. As stated in the last paragraph of the first column on page II-2 of the DEIS, no preferred alternative(s) was identified in the DEIS as none existed at the time the DEIS was published. A preferred alternative is identified in the final EIS, as is required by the CEQ Regulations (1502.14[e]). The management direction in each alternative applies equally to land which is federally-owned or privately-owned unless a difference is specifically stated. A substantial level of detail was devoted to each of the alternatives as is required by the CEQ Regulations (1502.14[b]). The level of detail in each alternative is considered to be sufficient to allow reviewers to understand their implications and evaluate their comparative merits.

Comment 9 - Anadromous fisheries are not addressed properly in the document.

Response - Since the Wild and Scenic River Management Plan does not have the authority to decide whether anadromous fishruns will be reintroduced to the river above Condit Dam, this issue was not addressed in the body of the DEIS. The Forest Service is providing information to the Condit Dam relicensing process, in which that decision will probably be made. Part of the information being provided includes the potential effects, both positive and negative, which reintroduction of anadromous fishruns could have on wild and scenic river values. Appendix C, Anadromous Fish, provides a discussion of this complex issue.

Comment 10 - Need a better description of upslope lands.

Response - The term upslope area was used to identify lands which are inside the boundary but outside the buffer. This term has been replaced by the term "outside buffer."

Comment 11 - Many upland land use issues cannot and should not be addressed in this EIS. Residential development is one such upland issue.

Response - The Wild and Scenic Rivers Act makes it clear that not only the designated rivers and streams are the object of the Act, but also their "immediate environments" and "the related adjacent land area." It states that the management plan "shall address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of this Act."

Comment 12 - Need clarification of "future funding."

Response - Funding needed for management of the river, including acquisition, is dependent on appropriations by Congress. See discussion in the new section on Funding near the end of Chapter II.

Comment 13 - Need to clarify what "work within the relicensing process" means - p.II-2.

Response - This section has been clarified. Also see Appendix C, Anadromous Fish, and the response to Comment 9 above in this section.

Comment 14 - No less than 13 violations of the county shoreline plan have occurred recently along this river.

Response - County records show seven substantive violations of Shoreline Master Plan regulations since 1988. Chapter III, Affected Environment, contains this information.

COMPLIANCE WITH THE WILD AND SCENIC RIVERS ACT

Comment 1 - Alternatives 1, 4, and 5, if implemented, would provide very little in the way of protection for the natural, cultural, and recreational values of the lower White Salmon River. They should be rejected out of hand as they would completely fail to carry out the sense and purpose of the National Wild and Scenic Rivers Act.

Response - As stated on page II-2 of the DEIS, it was concluded that Alternative 1 would not, in all cases, provide adequately for the required protection of Wild and Scenic River values. Alternative 1 was included because there is a requirement to display an alternative which shows what the consequences would be without any further actions by the managing agency. The Wild and Scenic Rivers Act calls for protection and enhancement of a designated river's outstanding values. It also says that other uses, which do not substantially interfere with use and enjoyment of those outstanding values, should not be limited. It is not specific about how protection and enhancement should be balanced with other uses of the river area. Rather, it allows management plans to "establish varying degrees of intensity for its protection and development, based on the special attributes of the area." Alternatives 4 and 5 are thought to provide minimum levels of protection and enhancement of the river's values as required in the Act.

LETTERS FROM ELECTED OFFICIALS, COUNTY, STATE, AND FEDERAL AGENCIES, AND INDIAN TRIBES

Klickitat County Board of County Commissioners
Klickitat County Planning Department
Klickitat County

WA State Parks & Recreation Commission, Scenic Rivers Program
WA State Department of Transportation, District 4

Department of the Air Force, Environmental Planning Office
Department of Health & Human Services, Public Health Service
US Environmental Protection Agency, Region 10
USDA, Soil Conservation Service
USDI, Bureau of Indian Affairs, Yakima Agency
USDI, Bureau of Indian Affairs, Yakima Agency
USDI, Fish and Wildlife Service
USDI, Office of the Secretary, Office of Environmental Affairs

Yakima Indian Nation, Fish, Wildlife Committee
Yakima Indian Nation, Yakima Tribal Council

Page 2
Lower White Salmon River
EIS Response

right way and a wrong way to do things. In this board's view, it isn't a question of whether designation was appropriate or inappropriate, but one of process. Congress, figuratively, handed the Forest Service a rumpled shirt, told it to fit it on the river valley, and then to iron out the wrinkles. Because of the land ownership composition, Congress should have preceded designation with a suitability study, just as it required for the upper stretches of the White Salmon and Klickitat rivers, thereby offering area residents an opportunity to try the shirt on to see if it fits before being asked to buy it.

Be this as it may, the designation on the Lower White Salmon has been viewed positively and negatively by landowners and residents. Despite their differences of opinion, local folks agree on one thing: the current character of the river valley must be maintained. The question is, how can this goal best be accomplished?

Some area residents believe the goal can be met under existing and future regulations, county and state. They tend to see river protection and adjacent uplands development as local issues best dealt with locally. Moreover, they argue their approach is more pragmatic in that it calls for reliance on the framework of laws and regulatory agencies, yet demands greater accountability of the system in the execution of the laws.

Conversely, there are area residents who think the goal can only be met under strict federal management of outstanding and other valuable resources. They view river and resource protection as national issues, requiring federal-government involvement. This approach relies on bringing in a federal agency to provide oversight of local land uses and financing for a major public land purchase - aimed at keeping development from overrunning the valley.

The Board of Commissioners is aware of and concerned about the cumulative effects land management and development practices could have on the landscape and, for its part, is committed to making the system work. The board also recognizes the area's economy is in transition from one being largely dependent on resource extraction (logging and lumber milling) and commodity sales (logs, lumber and fruit) to one embracing recreation and tourism as legitimate economic components. The board also notes the importance of protecting aesthetic and scenic qualities that residents and visitors alike find pleasing in order to foster the chances for success of recreation and tourism.

The County has taken steps to see to it that this goal is met. First, the County updated its Shorelines Management Plan, and now has initiated a comprehensive sub-area plans update for the entire river valley. The County, however, is sensitive to the "taking" issue and is reluctant to use county land-use controls to help the Forest Service meet its management direction.



KLICKITAT COUNTY COMMISSIONERS

205 S. Columbus, Room 101
Goldendale, Washington 98620

September 17, 1990

Area Manager
Columbia River Gorge National Scenic Area
902 Masco, Suite 200
Hood River, OR 97031

Attention: Lower White Salmon River Management Plan

Dear Sirs:

The White Salmon River is truly an outstanding and valuable resource, as residents of Klickitat County's White Salmon River Valley will readily explain to anyone even casually interested. The river is important to county residents both in terms of how they define their way of life and the way they earn their living. Maintaining this quality of life and the livability of this environment are the long-term goals of Klickitat County and its residents.

As the local governing body, the Klickitat County Board of Commissioners is charged with formulating an official response to the Draft Environmental Impact Statement for the Lower White Salmon National Scenic River Management Plan. The board reached the County's position after listening to landowners' and residents' concerns, through personal contacts, by holding a public hearing on the County Shorelines Management Plan Update, by attending public meetings and workshops, and reviewing pertinent documents. It is the board's judgment that a Modified Alternative 3 best addresses local issues and concerns (see Management Theme No. 1, page S-2), yet meets the legislative intent of the Wild and Scenic Rivers Act by protecting the outstanding values identified during study subsequent to the 1986 Congressional designation (see Management Themes Nos. 2-4, p.S-2).

Without speaking to the merits of designation, the board believes Congress erred when it instantly designated 7.7 miles of the Lower White Salmon as a National Scenic river--an action which affected only private land, and some 2,465 acres of it, at that. By opting for this "instant" approach, Congress once again proved there's a

In view of this, the Board of Commissioners reaffirms its position that the Forest Service must compensate fairly landowners whose property rights are restricted or otherwise compromised as a result of management plan implementation in the river corridor boundary. However, the board questions the involvement of the Forest Service in land-use matters outside the boundary. The board believes this is the wrong planning process for addressing such issues and concerns and, in response to this, the board continues and remains willing to take necessary and appropriate action.

However, the board recognizes that some growth is inevitable, and assumes some change in the environment is acceptable. (The potential for additional orchards exists in the river corridor. Perhaps as mitigation, the Forest Service could work with orchardists to develop organic farming practices in these areas to allay environmental concerns about pesticides and pollution.) But some growth or development doesn't necessarily mean a significant change in the landscape.

Through responsible planning, the Board of Commissioners believes the County can meet the challenge of maintaining the rural character of the Lower White Salmon River Valley. (For example, the County could down-size the Husum Town Center to discourage residential development, and encourage new development to occur at BZ corners.) County residents have been good stewards of the land and can continue to be under a joint County-Forest Service management authority that emphasizes public education, awareness and assistance over property acquisition.

In summary, the Board of Commissioners proposes a river corridor management plan which includes:

Joint Management Authority, with the county and state having lead role in uplands resource management and regulation, the Forest Service on outstanding resource protection and instream resource management. A protocol among county, state and federal agencies for interagency cooperation, consultation and consideration should be established. Klickitat County Planning Department could serve as coordinator for all activity reviews. The managing committee would be served by a citizens advisory committee.

A quality white water boating experience, predicated on low-impact numbers of users and a tightly controlled program which minimizes effects on landowners. The County is addressing the issue of appropriate recreation development for the area through its planning process. The board believes it's in the county's best interest to capitalize on the recreation boom, but not at the risk of upsetting the balance now in place. For this reason, and because the carrying capacity of facilities and infrastructure in Ilusum-BZ area is in doubt, the board sees no sense in putting together a plan which maximizes the recreation potential for river usage and for landowner-use-group conflicts, as well as places an added burden on county services.

Water Quality and Quantity Monitoring Programs. The county supports establishing minimum flows to protect outstanding features, yet is concerned about how far-reaching these programs might be. For example, if the goal is to prevent logging in watersheds of tributaries, the board supports the goal and the policy. If the goal is to severely restrict withdrawals (wells and water rights permits), the board supports the goal but not the policy. Perhaps a "net withdrawal" policy can be considered.

Protection of Significant Cultural Resources. The county supports efforts of the Native American community to protect and preserve Native American cultural sites. The board, moreover, believes these sites should be acquired and managed by the Native American community.

Resident Fish Enhancement Programs. The county feels fisheries resource management should be left to the Washington Departments of Wildlife and Fisheries, and pledge to support their efforts. The County, however, iterates its opposition to reintroduction of anadromous fish above Condit Dam - unless it can be shown through independent scientific investigation that resident fish populations won't be impacted.

Finally, the Board of Commissioners invites the Regional Forester and/or his staff to Klickitat County to meet and discuss the County's positions on the White Salmon and Klickitat rivers. Thank you for your time and attention to this matter. With warmest regards.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
Klickitat County, Washington

Daryl C. Spalding
Daryl C. Spalding, Chairman

DeLos Reno
DeLos Reno, Commissioner

Sverre Bakke
Sverre Bakke, Commissioner

AGENCY: Klickitat County, Washington

RESPONSE: To Lower White Salmon River Draft EIS

PREFERRED ALTERNATIVE: Modified Alternative 3

F.S. RECEIVED

SEP 18 1990

Columbia River Gorge
National Scenic Area

ADMINISTRATION: Joint County-State-Forest Service Management Committee under co-operative agreement, with an advisory committee comprising local citizens and interests (could be the County's White Salmon River Shorelines Committee).

GOAL OF ALTERNATIVE: To maintain the current character of the area, enhancing Wild and Scenic river values where possible to increase natural character, yet minimizing effects on landowners.

BOUNDARIES: Establish boundary that protects views from the river, generally between 200 and 400 feet on each side, except at Husum, reduce width of boundary to 100 feet. (Approximately 81 acres per river mile -- average about 335 feet from river on each side. Total acres = 626 acres.)

CULTURAL RESOURCES: Compile a comprehensive and systematic oral history and archival inventory of identified sites. Perform on-the-ground survey only on public lands within the boundary, unless private landowners voluntarily allow surveys to be done. On other private lands, inventory sites in response to project proposals. In such instances, the County will request for its record information, e.g., surface evidence and oral history, on identified and inventoried Native American sites.

Costs of inventories and evaluations resulting from work done by the Forest Service or its contractors shall be borne by the Forest Service. Also, the County doesn't want to see a second level of development review, whereby the Forest Service may attempt to exercise project approval or denial authority.

Most significant cultural sites should be acquired, if needed, to protect them from current or impending adverse effects. The County supports the local Native American community in its efforts to protect the sites. Furthermore, the County believes the Native American community should have the sites under its own management authority, not the Forest Service's.

RECREATION: Provide a "semi-primitive, non-motorized" boating experience (low levels of perceived crowding and high levels of naturalness). Restrict boating opportunities to 1988 use levels by implementing permit system for private and commercial boaters; also, a registration system. Allocate use between private and commercial boaters based on 1988 use ratios. Distribute use among commercial boaters based on 1988 use ratios. The Forest Service should concentrate its management focus on protecting instream resources.

Develop a safety plan with county, state and federal participation. Use the permit system to ensure that commercial operators are

Page 2
Response

qualified, insured and possess all the necessary safety equipment, and that private boaters are exposed to safety information and the need for proper equipment. A mandatory self-registration system should be implemented to ensure the latter is enforced.

The County and Forest Service will work together to limit the number of cable launches at BZ Corners to that which they agree is necessary to manage user pressure. At least one launch would be a federal facility or would be provided to the public through agreements with other agencies or private parties.

Continue to provide river/map guide at BZ Corners put-in, Husum Falls and the take-out at Northwestern Lake. Add information that would: 1) address private land ownership; 2) encourage low-impact recreation and protection of resource values; 3) address boating skill levels, safety concerns, portaging Husum Falls, procedures at the take-out and respect for other user groups; and 4) direct additional recreational use outside the boundary. Provide interpretation/educational opportunities at points of interest, and small picnic areas at BZ Corners and Husum. Provide public sanitation and parking in appropriate amounts at these locations as well as at put-in at BZ and take-out at Husum.

Construct a few short trails to specific points of interest, and a trail away from but paralleling the river between the stand of large trees and BZ Corners. A bicycle trail along State Highway 141 is an issue the County will seek to have addressed through a different planning process -- The Regional Transportation Planning Organization, of which the County is a member.

Prevent off-road use of vehicles on federally owned lands and in the buffer unless for necessary agricultural or forestry uses.

INSTREAM RESOURCES: A "net withdrawal" policy to assure current levels of flow are maintained should be implemented. Existing water rights should be recognized through adjudication. A gauge should be constructed at Husum to indicate water levels.

An instream water quality and quantity monitoring program should be established. Minimum flows necessary to protect outstanding resources should be established.

The County and Forest Service should coordinate with the state to enforce existing non-degradation policy. A program to improve water quality by assisting landowners in voluntarily improving practices if they are currently degrading quality should be implemented.

Cooperate with the Washington Department of Wildlife in resident fish protection projects. Recommend adoption of harvest regulations to protect resident fish populations. Consider catch-and-release, barbless hooks, no bait, restricted seasons. Leave fisheries management to Wildlife Department.



Klickitat County Planning Department

David Kunz
Planning Director

Courthouse Annex
228 West Main, Room 150
Goldendale, WA 98620
(509) 773-5703

E.S. RECEIVED
R6

SEP 18 1990

Columbia River Gorge
National Scenic Area

M E M O R A N D U M

DATE: September 17, 1990

TO: U.S. Forest Service

FROM: David Kunz, Planning Director

RE: Wild and Scenic Rivers: Lower Klickitat and White Salmon
Rivers Draft EIS

Due to time constraints and staff limitations, I could not detail my comments on the draft plans for both lower rivers. However, I offer these general comments:

The lower Klickitat Plan document has much more readability and artistic style than the lower White Salmon document. If possible the lower Klickitat style should be adapted to the lower White Salmon plan. Furthermore, the mapping style of the lower Klickitat Plan is superior to the lower White Salmon Plan. The lower White Salmon plan also had more detail (a benefit) but perhaps some of it could be addressed as an appendix to the final plan.

Within both plans, the discussion of the County Shorelines Plan should be revised to reflect the current standing.

Within in both plans some areas previously subdivided may be considered buildable under present county standards.

Within the lower White Salmon Plan the following particular concerns apply:

Vicinity map facing p I-1: Please indicate that the area within the Yakima Indian Nation encompassing the Glenwood vicinity is presently considered disputed with regards to actual boundary line.

p. II-5, 1st bullet under Alternative 1: Should indicate the county's minimum river frontage requirement for subdividing.

p. II-5, 4th bullet under Alternative 1: EPA 1 also considered an effective primary control.

Anadromous fish should not be introduced in the Lower White Salmon River above Condit Dam. The County recognizes, however, this issue will be properly addressed through the sub-basin planning process and Condit Dam relicensing process. The County and Forest Service will coordinate and consult their advisory committee prior to publicly commenting on the issue through these processes, or taking positions.

Removal of woody debris should be allowed for safety of river runners only. Sponsor semi-annual river clean-up. Preserve historic river-related structures for interpretive purposes.

UPLAND RESOURCES: Klickitat County Shorelines Master Plan, zoning and other pertinent and applicable regulations shall be the primary tools for regulating local land-use activities. The County will provide landowners technical assistance to help them meet the goal and objectives of this alternative. The County also will study and attempt to develop a conservation tax credit program for the benefit of landowners who practice conservation and don't desire federal involvement on their property.

To meet its management direction, the Forest Service has as its key management tools its acquisition authority, and ability to provide scenic/conservation easements and technical assistance.

It is recommended responsible state agencies rigorously enforce applicable state laws.

Develop a protocol among local, state and federal agencies for interagency cooperation, coordination and consultation. Klickitat County Planning Department could serve as the coordinating body for all activity reviews.

LOWER WHITE SALMON RIVER DRAFT EIS

Chapter III Affected Environment Plan Communities - Oregon White Oak Communities:

p. III-15

The Oregon White Oak community was not identified as an outstanding resource in evaluating the White Salmon River Management Plan. It is largely associated with xeric sites some distance from the river. It is not appropriate to tag this issue onto Wild and Scenic River Management.

Threatened, Endangered and Sensitive Plant Species

p. III-19

While there are known to exist a number of State threatened, endangered and sensitive plant species in this area, it is inappropriate to list all the species that some unreviewed individual feels may be found. The unaware reviewer may surmise, erroneously, that the TES species exist here and just have not been found.

Biological Diversity

p. III-21, Table III-4

There is no description of the criteria used to define the components of land usage on the successional stage described. This unreviewed work is very amateurized.

Unique Habitats

p. III-20

This section is presumptuous in referencing two federal sensitive animal species and their possible occupation of the river corridor. Certainly the 2664 acres included in the most liberal river boundary could have been more carefully ground truthed for presence of sensitive species.

p. II-22, Footnote 1: should read, "under the Updated Klickitat County Shorelines Master Plan.

p. III-54, Local Regulatory Authorities: Wild and Scenic River Overlay Zone is repealed; county is developing a draft Comprehensive Flood Plan which will influence uses along river.

The county has contracted with a consulting firm to update the Comprehensive Land Use Plan and Zoning. Consultant has begun said work.

p. III-55, One benefit of the Resource Lands District is that even 20 acre or above parcelling, exempted by state platting laws must be evaluated by the county. A drawback is that the evaluation/ordinance does not regulate where the development may occur, only how much and how often.

p. III-56 SMP General Background: This section should reflect adoption of 1990 Update.

corridor (herds of several hundred); Alternative 5 describes ORV use but who would use an ORV to go where in a river canyon.

Cumulative Effects

p. IV-12

There is discussion of wildlife that require large acreages relative to the lower White Salmon River. These species have not likely inhabited this area for over 100 years and are not likely to return to the rural, suburban environment. Winter range protection for deer can best be addressed by control of dogs and poaching.

Recreation - Access and Facilities

p. III-30

This section only vaguely addresses the need for public restrooms along the river. Without providing significant restroom facilities other than at BZ Corner, Husum and Northwestern Lake, the river will become contaminated with raw sewage from river users.

Chapter IV - Environmental Consequences Alternate 2

p. IV-2

There is a mention of "possible pesticide input" from agriculture/forestry use. If pesticide contamination is a concern of the Washington State Department of Agriculture, State Department of Ecology or the U. S. Environmental Protection Agency should be notified. Sufficient and strict laws exist already that prohibit and regulate pesticide movement into surface and groundwater.

Alternate 3

p. IV-3

The last paragraph addressed instream water withdrawals. All existing water uses should be honored through State adjudication of water rights. Then minimum stream flows should be established and monitored.

Cumulative Effects

p. IV-4

Many upland land use issues cannot and should not be addressed in this River Management Draft EIS. Residential development is one such upland issue. The Forest Service would, however, do well to promote and support development of community water and sewer in the Husum-BZ Corners area.

Effects on Plants and Animals

p. IV-8-11

This section is presumptuous and amateurish in both content and conclusions: Alternative, describes impacts on the Northwestern Pond Turtle which haven't been documented in the study area; Alternative 2 lists such wildlife as mountain lions not being able to survive in such a small acreage-mountain lions do not do well in rural suburban communities. Also in this alternative, it fails to mention that most deer wintering occurs well outside the river

LW16



STATE OF WASHINGTON

WASHINGTON STATE PARKS AND RECREATION COMMISSION

7150 (Leavenworth Lake) 83-11 • Olympia, Washington 98501-5711 • (360) 754-5758

September 6, 1990

Area Manager
Columbia River Gorge National Scenic Area
Attn: Lower White Salmon River Management Plan
902 Wasco, Suite 200
Hood River, OR 97031

Dear Sir:

In response to the management studies for the Klickitat and White Salmon Rivers, I am expressing the position of the Washington State Parks and Recreation Commission (Commission) and the Committee of Participating Agencies (Committee), which includes Washington State Departments of Natural Resources, Ecology, Fisheries, Wildlife, Interagency Committee for Outdoor Recreation, Transportation, Association of Washington Cities, Washington Association of Counties and two private sector members. I want to make a single response representing these agencies to all four draft documents.

The State Scenic Rivers Program is a cooperative river management program in which the legislature designates rivers of significance, which mandates state policy to prohibit dams and impoundments and begin a cooperative local and state management plan. Designated state Scenic Rivers become part of the state Hydropower Plan submitted to the Federal Energy Regulatory Commission and requests prohibition of dams or impoundments on designated river reaches.

Both Klickitat and White Salmon Rivers are recognized as significant free-flowing rivers and this state program and its committee will support Scenic River designation to the legislature upon local legislator(s) request. If the legislature acts in support of this designation, a River Council is set up to begin the management process. The River Council includes representatives from affected state agencies, local jurisdictions in the river area and a local citizen and landowner advisory board. For the management of the rivers, federal funding is requested and federal action to prohibit dams or impoundments.

For the Klickitat River, we recommend state Scenic River designation from Summit Creek to the Columbia River for contiguous management. To further clarify the state's role in management; the State Scenic Rivers Program is mandated by law (RCW 79.72) to protect private property rights and shall not

LW16

Klickitat County

228 W. Main Street, Room 210
Goldendale, Washington 98620

(509) 773-4311



M E M O R A N D U M

DATE: September 17, 1990
TO: U.S. Forest Service
FROM: Bob Gorman, County Liaison/Task Force
RE: Wild and Scenic Rivers: Lower Klickitat and White Salmon Rivers Draft EIS

LOWER KLICKITAT RIVER DRAFT EIS

State Water Quality Standards

p.3-9

This section is erroneous in describing pesticide (herbicide) regulations. The U.S. Environmental Protection Agency (EPA), as authorized by the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), is responsible for pesticide licensing and use regulations. State licensing, regulation, and complaints are the responsibility of the State Department of Agriculture as authorized by Revised Code of Washington RCW15.58 and 17.21 and Washington Administrative Code WAC 16-228-162, -164 and -166.

bh
cc: Committee of Participating Agencies

ACKNOWLEDGMENTS



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C. 20330

28 August 1990

Mr. Arthur W. DuFault
Area Manager
Columbia River Gorge National Scenic Area
902 Wasco, Suite 200
Hood River, OR 97031

Re: Telephonic Discussion between Mr. Steve Mellor and
Major Shiell August 17, 1990 concerning:
Lower White Salmon River Management Plan
Upper White Salmon River Study
Lower Klickitat River Management Plan
Upper Klickitat River Study

Dear Mr. DuFault:

My office recently recieved your Draft Environmental Impact Statements for the Upper and Lower White Salmon and Upper and Lower Klickitat National Wild and Scenic River Management Plan. We appreciate the opportunity to review and respond to these initiatives.

My office is part of the Headquarters Air Force Environmental Planning Office. Our charter includes managing, directing and providing the Air Force guidance with respect to the National Environmental Policy Act (NEPA) of 1969. Compliance with NEPA while balancing mission readiness and protecting the environment are our primary concerns. A key to developing and maintaining mission readiness is airspace.

Airspace, training areas, and ranges are critical to developing and sustaining mission readiness for the United States Air Force. The Air Force uses these areas to train new aircrew members in the intricacies of aviation and maintain the flying proficiency levels of our more experienced aircrews. This proficiency flying is required to maintain the levels of competence required by our world-wide mission. To maintain the proficiency of our aircrews in low level tactics, all military services conduct low altitude training flights. The training routes selected for these flights are chosen to simulate realistic combat environments. To minimize the impact of these low altitude operations, and to enhance the safety of low flying operations, the routes and areas selected for these flights are carefully chosen. The areas are selected to avoid, as much as possible, airspace near controlled and uncontrolled airports, other hazards to aviation, and populated areas. Every effort is made to help ensure the safety of our pilots as well as reduce hazards and disturbances to the public. Military flight operations in these areas are flown in accordance with criteria developed jointly by the Department of Defense and the Federal Aviation Administration.

With respect to the Upper and Lower White Salmon River Draft EIS's, there is one Military Training Route (MTR) which should be addressed in the documents. This MTR is Instrument Route (IR) 344, controlled by the Navy's COMNAVYAWING PAC, Naval Air Station, Whitty Island, Washington. The route centerline crosses near the town of Bingen, Washington, roughly from North to South. The route corridor is four (4) miles from either side of this centerline and has a minimum altitude of 500 feet above the ground.

IR 343 is located near the Upper and Lower Klickitat River proposals. The centerline of IR 343, also controlled by Whitty Island Naval Air Station, crosses near the town of Klickitat, Washington, roughly from South to North. The corridor for this route is four (4) miles from either side of the centerline. The minimum altitude of this MTR is 6,000 feet above mean sea level, which is approximately 3,000 feet above the ground in this area.

The military training routes over the Lower and Upper White Salmon and the Upper and Lower Klickitat Rivers are a part of the existing airspace in the region of the proposed action, and constitute a portion of the affected environment. As a result, these airspaces should be addressed in the environmental analysis for the proposals. The early coordination of your proposals with the affected military services, and regional representatives of the Federal Aviation Administration could resolve potential conflicts pending designation of wild and scenic rivers and the existing airspace structure near the proposals.

Again, I appreciate the opportunity to reply to your document. Any information you desire with regards airspace and airspace concerns, feel free to contact my office: AF/LEEV-P, Environmental Planning Office, Pentagon, Washington, DC 20330, Telephone (202) 695-8197.

Sincerely

James R. England, Lt Col, USAF
Chief, Range and Airspace Branch
Environmental Planning Office

1 Attachment
Area Chart

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta GA 30333
August 29, 1990

Arthur W. Dufault, Area Manager
Columbia River Gorge National Scenic Area
ATTN: Lower White Salmon River Management Plan
902 Wasco, Suite 200
Hood River, Oregon 97031

Dear Mr. DuFault:

We have completed our review of the Draft Environmental Impact Statement (DEIS) for the Lower White Salmon River Management Plan. We are responding on behalf of the U.S. Public Health Service.

Water quality and quantity within the designated section of White Salmon River may be affected by a variety of factors, as noted in the DEIS on page IV-1. Although mitigation possibilities are identified that would minimize adverse impacts (Intergovernmental Resource Center, 1988), the DEIS fails to elaborate on the likelihood of these measures ever being implemented. Considering the cumulative effects of future developments under current zoning requirements without necessary improvements in community water, sewage and storm drainage, contamination of water resources could be significant, particularly during low flows. Therefore, we emphasize the importance of facilitating the implementation of identified mitigative measures, including the strengthening of community zoning regulations.

Each of the alternatives could result in an increase in recreational use, with Alternative 5 providing the largest number of recreational opportunities. However, reference to a possible need to expand sanitation facilities is only mentioned for Alternative 2. Potential adverse impacts of increased recreation upon sanitation (i.e. solid waste collection and disposal, restroom facilities, and potable water supply) should be identified and appropriate mitigation to minimize impacts should be briefly addressed in the Final document.

Thank you for the opportunity to review and comment on this document. Please insure that we are included on your mailing list to receive a copy of the Final EIS, and future EIS's which may indicate potential public health impact and are developed under the National Environmental Policy Act (NEPA).

Sincerely yours,

Kenneth W. Holt, M.S.P.H.
Environmental Health Scientist
Center for Environmental Health
and Injury Control



White Salmon National Wild and Scenic River
Management Plan - FEIS

United States
Environmental Protection Agency

Hopkins 10
1200 Sixth Avenue
Seattle WA 98101

Alexa
Idaho
Oregon
Washington



SEP 17 1987

REPLY TO
ATTN OF: WD-136

Steve Mellor
U.S.D.A. Forest Service
Columbia River Gorge National Scenic Area
902 Wasco Avenue
Hood River, Oregon 97031

Dear Mr. Mellor:

The Environmental Protection Agency (EPA) has reviewed the Draft Legislative Environmental Impact Statement (EIS) for the **Lower White Salmon National Wild and Scenic River Management Plan**. Our review was conducted in accordance with the National Environmental Policy Act and our responsibilities under Section 309 of the Clean Air Act.

This draft EIS evaluates five alternatives for managing the Lower White Salmon River since its 1986 designation as a Scenic river segment in the National Wild and Scenic Rivers System. The draft EIS presents a reasonable range of alternative management plans. The different management plans strive to balance the goal of increasing or maintaining the current natural character of the river corridor and the goal of minimizing the effects on private landowners. Alternatives 3 and 4 appear to balance these somewhat conflicting goals to the maximum extent. These two alternatives maintain existing water quality and quantity, aquatic habitat, and wetlands with minimal socioeconomic effects.

Based on our review, we are rating this draft EIS LO (Lack of Objections). An explanation of the EPA rating system for draft EISs is enclosed for your reference. This rating and a summary of EPA's comments will be published in the Federal Register.

We appreciate the opportunity to review this draft EIS. If you have any questions about our review comments, please contact Sally Brough in the Environmental Review Section at (206) 442-4012.

Sincerely,

Ronald A. Lee
Ronald A. Lee, Chief
Environmental Evaluation Branch

Enclosure

SUMMARY OF THE EPA RATING SYSTEM
FOR DRAFT ENVIRONMENTAL IMPACT STATEMENTS
DEFINITIONS AND FOLLOW-UP ACTION *

Environmental Impact of the Action

LO--Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC--Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA intends to work with the lead agency to reduce these impacts.

EO--Environmental Objections

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potential for significant environmental impacts. EPA believes that the draft EIS does not contain sufficient data, analyses, or discussions to make such a determination. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment
February, 1987



United States Department of the Interior
BUREAU OF INDIAN AFFAIRS

YAKIMA AGENCY
P. O. BOX 632
TOPPENISH, WA 98948 -0632

LAND OPERATIONS

17 of 10

Area Manager
Columbia River Gorge National Scenic Area
902 Wasco, Suite 200
Hood River, OR 97031

Attention: Lower White Salmon River Mgt. Plan

Dear Mr. Oufault:

We have reviewed the OEIS for the Lower White Salmon River management plan and have the following comments:

We recommend that alternative two be selected as the preferred alternative. We believe that alternative two affords the most protection for affected natural resources and the Yakima Indian Nation's interests associated with this management plan.

The treaty rights statements on pages S-4 and ApC-4 do not include the Yakima Indian Nation's right for their fishermen to take fish above the Condit Dam. As you know, the Yakimas reserved this right in their 1855 treaty, recognized by the federal government. Therefore, we believe the Yakimas' right to take fish above Condit Dam should not be questioned, but rather obliged in the EIS for the management plan for the Lower White Salmon River.

We believe that caselaw and federal statutes regarding Indian treaty rights clearly outline management priorities and strategies along the Lower White Salmon River. We understand that caselaw also affirms and strengthens implied treaty reserved water rights off-reservations. The Yakima Indian Nation's treaty reserved rights and privileges must be recognized in light of any management plan for White Salmon River.

Thank you for mailing this agency a copy of the DEIS and affording us an opportunity to send comments. Please mail this agency a copy of the FEIS.

Sincerely,

Robert J. Williams
ACTING Superintendent

Soil
Conservation
Service

United States
Department of
Agriculture

Rock Pointe Tower II
West 316 Boone Avenue, Suite 450
Spokane, WA 99201-2348

September 19, 1990

SUBJECT: DEIS: Lower White Salmon National Wild and
Scenic River Management Plan

Area Manager
Columbia River Gorge National Scenic Area
ATTN: Lower White Salmon River Management Plan
502 Wasco, Suite 200
Hood River, OR 97031

Thank you for the opportunity to review the management plan of the Lower White Salmon River.

We have no comments on this DEIS at this time.

Lynn A. Brown
LYNN A. BROWN
State Conservationist

cc: James B. Rowman, Director, ECS, Washington, DC

The soil conservation service
is an agency of the
Department of Agriculture



1 W

United States Department of the Interior
BUREAU OF INDIAN AFFAIRS
YAKIMA AGENCY
P. O. BOX 632
TOPPENISH, WA 98948 -0632

YAKIMA RIVER GORGE NATIONAL SCENIC AREA
902 WASCO, SUITE 200
HOOD RIVER, OR 97031

RE EIS's for Klickitat and White Salmon rivers

Dear Sir:

We have received a copy of the Yakima Indian Nation's letter, signed by the Tribal Council Chairman and dated November 5, 1990. We accept the letter as the Yakima Indian Nation's position statement concerning alternatives expressed by draft environmental impact statements for segments of Klickitat and White Salmon rivers.

We would alter our preferred alternative recommendations to support the Yakima Indian Nation's recently promulgated position for management strategies along the affected segments of Klickitat and White Salmon rivers. We would also recommend the Forest Service incorporate the Yakima Indian Nation's position into final preferred alternatives for affected segments of the Klickitat and the White Salmon rivers.

Sincerely,

John J. O'Neil
Superintendent

NOV 13 1990

RECEIVED
F.S.

11/13/90

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20500

11/13/90

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Fish and Wildlife Enhancement
2625 Parkmont Lane SW, Bldg 1
Olympia, Washington 98501
206/753-9440 FTS 434 9431

September 14, 1990

Mr. Arthur W. DuFault, Area Manager
Columbia River Gorge National Scenic Area
Attn: Lower White Salmon River Management Plan
902 Wasco, Suite 200
Hood River, Oregon 97031

Re: Lower White Salmon National Wild and Scenic River Management Plan

Dear Mr. DuFault:

The U.S. Fish and Wildlife Service appreciates the opportunity to review the draft environmental impact statement for the Lower White Salmon National Wild and Scenic River Management Plan, and offers the following comments and recommendations.

Of the alternatives developed in the EIS, the Service prefers Alternative 2 because it provides the greatest protection for both instream and terrestrial resources. This alternative includes the largest management boundary allowed under the Wild and Scenic Rivers Act, and contains the most restrictive development provisions, prohibiting future residential and commercial development within the 400 foot wide buffer. Additionally, some conflicting uses would be phased out through federal acquisition. As a result, fish and other aquatic resources would benefit from the greater protection afforded to water quality, i.e. the reduction of sediment, nutrient and pesticide inputs. Wildlife species would benefit both from the protection of existing habitat and the restoration of certain areas through natural ecological processes. Specifically, riparian and old growth ecosystems, and wildlife travel corridors would receive the greatest degree of protection under this alternative. For the above reasons, the Service recommends the development of Alternative 2 as the preferred alternative in the final EIS.

Thank you for the opportunity to comment on the draft document. If you have questions regarding the above comments, contact Mr. Gwill Ging at the letterhead phone/address.

Sincerely,

Nancy J. Gloman
Nancy J. Gloman
Acting Field Supervisor

c: PO, Richmond

In summary, we are concerned that the lack of a full management plan associated with a clearly identified proposal action may limit effective public review opportunities. It is difficult to determine the full scope of direct and indirect impacts without knowing how existing and potential additional federal lands would be managed. In the absence of a forest-wide plan for these lands, it is assumed that the river plan will be the guiding comprehensive plan providing direction for all significant resource programs. It is therefore recommended that a revised draft plan/EIS be published with a clearly defined proposal action/management plan to provide a complete and accurate analysis for public review and comment.

Thank you for the opportunity to comment.

Sincerely,

Jonathan P. Deason
Jonathan P. Deason
Director
Office of Environmental Affairs

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

John F. Batruille, Regional Forester
United States Forest Service
Pacific Northwest Region
P.O. Box 3890
Portland, Oregon 97208

Dear Mr. Batruille:

The Draft Environmental Impact Statement for the Lower White Salmon National Wild and Scenic River has been reviewed. Our comments follow.

General Comments

As with the other wild and scenic river environmental documents recently completed by the Forest Services' Columbia River Gorge National Scenic Area office in Oregon, a proposed action has not been identified. Without an identified proposal, a determination that the analysis adequately addresses potential impacts cannot be made.

Specific Comments

The Service has presented a reasonable range of alternatives and done an effective job of explaining the management differences in them. However, Alternative 1 (No Action) and Alternative 5 (Minimize Effects on Private Landowners), if implemented, would not provide the protection of natural, cultural, and recreational values required by the Wild and Scenic Rivers Act. Alternative 2 (Balance All Wild and Scenic River Values and Increase Naturalness of Area) would be a most difficult alternative to implement, because the river segment flows across all private lands and because it would significantly restrict economic uses of the river area. In order to implement this alternative, a major Federal land acquisition program would be required or local and state governmental units would have to adopt and enforce stringent and development land use controls. Alternative 4 (Minimize Effects on Landowners while Focusing Protection on Outstandingly Remarkable Values) would barely meet the protective requirements of wild and scenic river designation. Alternative 3 (Maintain Current Character of River Area) provides a significant degree of protection and yet is reasonably implementable.

RECEIVED
SEP 24 1990
REGISTRATION UNIT

Lower Klickitat

Alternative 4 is preferred. The YIN agrees with the purchase of oak stands and increasing the river buffer for streamside protection of wildlife habitat. We believe that a program to decrease accidents and funds a Native American search-and-rescue team would be beneficial but permits for boating through the gorge are not necessary.

The management structure should be like the one in Alternative 3 in which the YIN joins the county, state and federal government on a Management Committee taking recommendations from an informal citizen advisory group. The general approach to resource protection should be for federal acquisition of lands as in Alternative 4 but with the assistance of the county to strengthen existing regulations. The river buffer should remain largely undisturbed. The establishment of instream flows for optimum production of fish is a requirement. The Yakima Indian Nation will work with the State, D.O.E., and USFWS, under federal funding provided by this process to establish instream flows.

The Klickitat River Basin was historically used by the tribes and bands of the Yakima Indian Nation and still contains great cultural significance. Protection of historic sites are essential. We request that federal funding referred to in Alternative 4 be made available to the Yakima Indian Nation to participate in a comprehensive archaeological inventory of lands within the corridor. We are concerned that the increased recreational development in Alternative 4 would promote activities detrimental to cultural resources. Therefore, no attempt should be made to increase demand for river recreation through active promotion or advertising.

The Yakima Indian Nation conditionally endorses the proposed Klickitat County Shoreline Management Plan and recommends adoption of its limited guidelines for activities within the Klickitat and White Salmon river corridors.

We recommend adoption of any measures which would drastically reduce the impacts of cattle grazing in the riparian areas. Federal funding is necessary for fencing projects. The federal purchase of lands is encouraged with the construction of cattle exclosures adjacent to the river in these areas.

Upper White Salmon River

Alternative 4 is preferred. The Yakima Indian Nation recommends the prohibition of dams in this area with the adoption of all requirements which would improve the current water quality conditions.

Established by the
Treaty of June 9, 1855

Confederated Tribes and Bands
of the Yakima Indian Nation



November 5, 1990

Area Manager
Columbia River Gorge National Scenic Area
Attention: Upper Klickitat River Study
802 Waco, Suite 100
Hood River, OR 97031

RE: Upper Klickitat River, Draft DL EIS
Lower Klickitat River, Draft EIS
Upper White Salmon River, Draft DL EIS
Lower White Salmon River, Draft EIS

Dear Sir:

The purpose of this letter is to provide your agency with comments from the Yakima Indian Nation on the above referenced documents. We are greatly concerned about the future management and the amount of protection of the natural and cultural resources in these river basins. As you are aware during the treaty negotiations at Walla Walla the Yakima Indian Nation reserved for all times in all lands ceded by them "the right of taking fish at all usual and accustomed places... and of erecting temporary buildings for curing them; together with the privilege of hunting, gathering food and berries, and securing their horses and cattle upon certain lands and waters, and the right of using the same" by the US Senate in 1855. History indicates that mismanagement has occurred in this area and provides the basis for our comments.

Upper Klickitat

Alternative 4 is preferred. We do not agree with Alternative 3 which would include boating by the public upstream from Summit Creek. We agree with the prohibition of dams and any projects which would have adverse impacts on the river. Plans should be submitted to the National Park Service for review and approval as hatchery facilities under the NPS Sub-basin Plans. We agree with plans which would maximize acquisition of lands by the Federal Government and offer the best protection for fish and wildlife and their habitats.

Post Office Box 151, First Board, Ephrata, WA 98946 (509) 665-5171

The re-introduction of anadromous fish into the basin is essential and supported by the Yakima Indian Nation. We will work with P.P. and L. and other entities to assist in this endeavor. Federal funds should be made available to the Yakima Indian Nation to participate in a comprehensive and complete archaeological survey of the White Salmon basin. We are concerned that increased and diverse recreational development will adversely impact cultural sites.

Federal acquisition of lands is preferred. A buffer zone of at least 400 feet is preferred with oak conservation plans incorporated into all timber harvests plans.

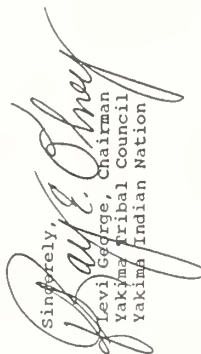
Lower White Salmon River

Alternative 2 is preferred. It offers the most appropriate strategies for the long term conservation of local wildlife resources. Commercial timber harvest should be sharply curtailed within as large a river corridor as possible. Selective timber harvest should only be considered to maintain the oak component of mixed hardwood/softwood stands in the absence of fire. These oak habitats are valuable to wildlife such as deer, turkeys, and gray squirrels. Historical practices of actively converting mixed stands to pure conifer stands should be abandoned within the management area. Alternative 2's proposal to re-convert current agricultural to forest stands may not ultimately be in the best interest of wildlife. Some of these agricultural tracts serve as valuable wildlife foraging area; however the addition of new agricultural lands should be discouraged (alternative 3). Maintenance of the naturalness of the Lower White Salmon should take precedence over recreational and other development which should be strictly controlled.

The Yakima Indian Nation is concerned that an adequate inventory is conducted in this area on cultural sites. Funding should be provided for the Yakima Indian Nation to participate in an inventory. These cultural resources are of very great value to the Yakima Indian Nation. We are committed to the preservation and enhancement of our tribal heritage and history. We recommend that Indian cultural resources, such as the historical dipnet fishery at Husum Falls and the documented campsite on Rattlesnake Creek, be designated an Outstanding Remarkable Resource of the White Salmon River Wild and Scenic study area.

The establishment of instream flows for optimum production is essential. The Yakima Indian Nation will work with the State, D.O.E. and USFWS under federal funding provided by this process to establish instream flows. No new water withdrawals should be allowed.

The Yakima Indian Nation is committed to the re-introduction of anadromous fish above Condit dam. All planning conducted by the Forest Service should include the potential for reintroduction of salmon and steelhead into the upper watershed. This maximizes use of the aquatic habitat and provides the greatest benefit to the majority of individuals who utilize the river.

Sincerely,

 David George, Chairman
 Yakima Tribal Council
 Yakima Indian Nation

LH:csb
 drafts

Confederated Tribes and Bands
of the Yakima Indian Nation



Established by the
Treaty of June 9,

November 6, 1990

Area Manager
Columbia River Gorge National Scenic Area
Attention: Lower White Salmon River Study
902 Wasco, Suite 200
Hood River, OR. 97031

RE: Lower White Salmon River Draft EIS

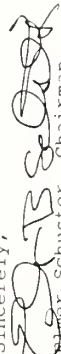
Dear Sir:

The purpose of this letter is to provide more detail on an issue that was mentioned briefly in the Yakima Nation's comments on the draft EIS's for the White Salmon and Klickitat rivers. In the comments on the Lower White Salmon River EIS, we recommended that Indian cultural resources be designated as an Outstandingly Remarkable Resource in the watershed. It is our understanding that such a designation would commit the USFS to maintain and enhance these resources. This would be consistent with the designation of the Indian fishery at Lyle Falls on the Klickitat River as an Outstandingly Remarkable Resource, and it would support our commitment to preserve and protect tribal heritage and history.

We specifically request that the USFS cite the historical Indian fishery at Husum Falls and the documented pit house remains on Rattlesnake Creek as evidence of the outstandingly remarkable characteristics of Indian residence in this watershed. The Husum Falls fishery provided anadromous salmon and steelhead for the subsistence of local Indian people until the construction of Condit Dam destroyed the runs. In addition, we know of tribal elders who recall use of the fish camp on Rattlesnake Creek prior to loss of the runs. Because the Yakima Nation is proposing to restore anadromous fish runs to the upper White Salmon River in connection with FERC relicensing of the Condit project, it is vital that the White Salmon River EIS also include provisions for restoring both the historical salmon runs and the Native American fisheries that once harvested the salmon.

Please inform us of your decision on this issue. Our staff will be made available to answer any questions you may have.

Sincerely,


Ermer Schuster, Chairman
Fish, Wildlife, Law and Order Committee

APPENDIX E
MANAGEMENT
PLAN

United States
Department of
Agriculture

Forest Service

Pacific
Northwest
Region



LOWER WHITE SALMON

National Wild and Scenic River Management Plan



ACRONYMS AND ABBREVIATIONS

ARPA	Archaeological Resources Protection Act
AUM	Animal unit month
CEQ	Council on Environmental Quality
CBFWA	Columbia Basin Fish and Wildlife Authority
CFS	Cubic feet per second
CRGNSA	Columbia River Gorge National Scenic Area
DBH	Diameter at Breast Height
DNR	Washington Department of Natural Resources
DOE	Washington Department of Ecology
DOT	Washington Department of Transportation
ESA	Endangered Species Act
EIS	Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FLMP	Federal Land Management Plan
FS	Forest Service
HPA	Hydraulics Project Approval
LAC	Limits of Acceptable Change
LEIS	Legislative Environmental Impact Statement
LWA	Land & Water Associates
MBF	Thousand board feet
MIS	Management Indicator Species
MMBF	Million board feet
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NPPC	Northwest Power Planning Council
NRHP	National Register of Historic Places
OHWM	Ordinary High Water Mark
OR	Outstandingly Remarkable
PILT	Payment in lieu of taxes
PL	Public Law
PP&L	Pacific Power and Light Company
RCW	Revised Code of Washington
RLZ	Resource Lands Zone
RM	River Mile
ROS	Recreation Opportunity Spectrum
ROW	Right-of-way
RVD	Recreation visitor-day
SCS	Soil Conservation Service
SDS	SDS Lumber Company
SEPA	Washington State Environmental Policy Act
SMP	Shorelines Master Plan
SOHA	Spotted Owl Habitat Area
T&E	Threatened and Endangered (Species)
TES	Threatened, Endangered or Sensitive (Species)
USC	United States Code
USDA	United States Department of Agriculture
USGS	United States Geological Survey
VQO	Visual quality objective
WDW	Washington Department of Wildlife
WNHP	Washington Natural Heritage Program
W&SR	Wild and Scenic River

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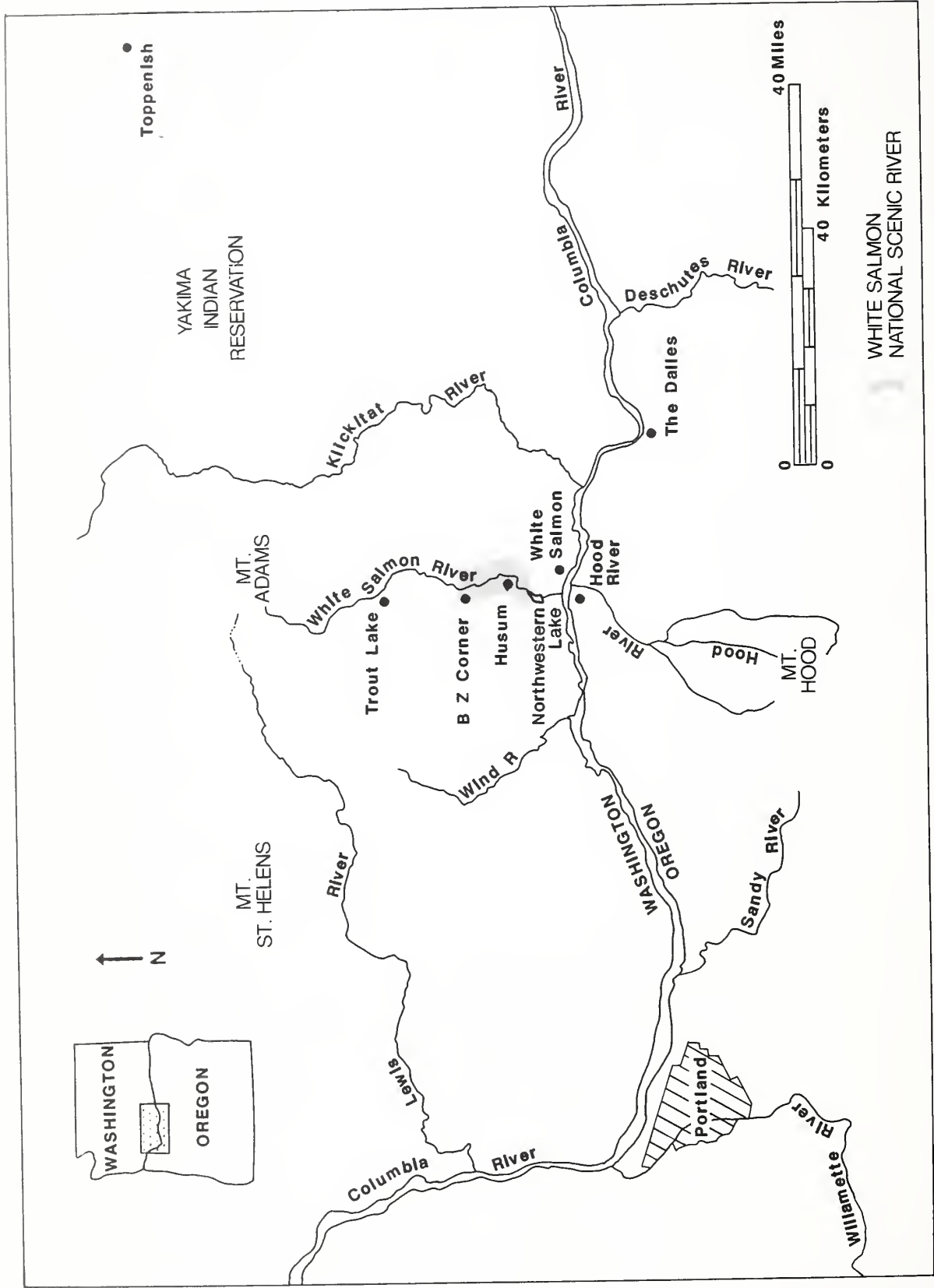
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SECTION I
INTRODUCTION



White Salmon National Scenic River and Vicinity

SECTION I

INTRODUCTION

GENERAL

This Management Plan for the White Salmon River National Wild and Scenic River guides activities which take place on all lands within the Wild and Scenic River Boundary, whether owned by federal, state, or local governments, or private individuals. It is the result of a public planning process that took place over several years with frequent consultation with a task force representing the State of Washington, Klickitat County, and various segments of the public interested in the management of the river. In that process, issues were identified, alternatives for resolving those issues were created, the potential effects of each of the alternatives was assessed, and a draft environmental impact statement (EIS) was prepared and distributed for review by government agencies and the public. As a result of analyzing comments from the public and the task force, a preferred alternative was synthesized upon which this Plan is based.

STRUCTURE OF THE MANAGEMENT PLAN

This Plan is comprised of four sections and a map.

Section I provides general information about the Plan, the Wild and Scenic Rivers Act (which required the Plan), the area in which the river is located, and important relationships between governing bodies, administering units, private and public lands, different portions of the White Salmon River, other pertinent documents, etc.

Section II provides the management direction which will guide the conduct of activities that take place on the land. Part of the direction is for specifically identified sub-portions of the entire river area (management areas) within which the desired condition is essentially the

same. Direction for these areas is in the form of descriptions of desired conditions plus a list of standards and guidelines which are intended to assure that the desired conditions are achieved and/or maintained. The other part of management direction is for resources which are treated in a similar manner regardless of the identified management areas they are located. It includes a statement of goals plus a list of standards and guidelines.

Section III provides information about the implementation of the management direction. It covers such things as budgets, administration of the river area (including the task force), inventories which need to be done, monitoring activities and results, land acquisition, a schedule of planned development activities, the process for amendments and revisions, etc.

Section IV includes summaries of the important authorities and regulations governing planning and management and many of the land use activities which may be allowed in the river area. These include the Wild and Scenic Rivers Act, the Final Revised Guidelines for Eligibility, Classification and Management of River Areas, the Klickitat County Zoning Ordinance, the Klickitat County Shoreline Master Plan, other important federal, state, and county authorities, and a copy of the Agreement Between Klickitat County and the Columbia River Gorge National Scenic Area.

The map, at this time, is the map of the Preferred Alternative from the Final EIS. After approval of this Plan and review of the boundaries by Congress, a detailed map that shows the preferred wild and scenic river boundaries and the location of the management areas will be prepared. Since one of the management areas encompasses the federal lands within the boundary, and since the amount of federal land will be growing (at least for awhile), the map will need to be updated

frequently for the first several years to accurately show the management area locations.

AREA OVERVIEW

The White Salmon River is located in south-central Washington state, in the southwestern portion of Klickitat County (refer to the vicinity map). The portion of the river which is presently included in the National Wild and Scenic Rivers System is located north of the Columbia River, upstream from the town of White Salmon. It includes a little less than eight miles of river between the head of Northwestern Lake (RM 5) and Gilmer Creek (RM 12.7).

As a whole, the White Salmon River drainage, an area of approximately 400 square miles, is one of transition. Located between the Cascade Mountains and the Columbia Basin, between the wet coastal, and dry continental climates, there are landforms, plants and animals of both regions present. In addition, the river begins on the glacial, snow-covered flanks of Mt. Adams, the second highest volcano (12,307 feet) in the Cascade Mountains. From Mt. Adams, the river drops over 7,500 feet as it flows south 45 miles to its confluence with the Columbia River. The Columbia carves the only near sea-level route through the Cascade Range and is the dominant factor in the area's rich natural and cultural history.

In its drop to the Columbia River, the White Salmon passes through alpine meadows, a steep and densely-forested canyon, the pastoral Trout Lake valley, a spectacular vertical-walled canyon, and oak/conifer woodlands. It flows through the rural towns of BZ Corner and Husum, before pooling behind Pacific Power Company's Condit Dam and forming Northwestern Lake.

One of the significant features of the White Salmon River in the designated portion is its generally sustained flow throughout the summer and fall. This is thought to be the result of ground water which has been carried through an underground network, emerging as surface water through numerous springs and seeps in the bottom of the canyon. This results in water

which is consistently cold and generally of excellent quality, and provides the basis for outstanding whitewater recreation opportunities.

Due to the presence of Condit Dam, there are no anadromous fish runs in the river at this time. However, the White Salmon River is exceptional for its habitat quality, diversity of species, abundance, and size of resident fish, and the recreational opportunity it offers. Consideration is presently being given to reintroduce anadromous fish above the dam.

The northern bald eagle, a species that is on the federal list of threatened or endangered (T&E) species, is known to be present within the Wild and Scenic River Boundary. Five other wildlife species which are either on the federal T&E list or the Region 6 Forest Service Sensitive Species List are suspected to be within the boundary. No federally listed T&E plant species have been identified within the boundary, but four plant species which are on the Sensitive Species List have been found, and twenty-five are suspected to grow here.

Plant communities of importance include the riparian communities associated with the White Salmon River and its major tributaries, several small areas of wetland-associated plant communities: Oregon white oak, and conifers. Mixed conifer stands of ponderosa pine and Douglas fir are important commercial timber species and have been used and managed for forest products since the end of the last century. They make up somewhat less than 40% of all the forest stands in the area. Oregon white oak, has been identified as a "critical" wildlife community by the Washington State Department of Natural Resources. Stands in which the white oak is the only species account for less than 1% of the forest stands. The remaining 60% of forest stands are a mix of white oak and conifers. This mix is thought by many people to be a significant feature of the White Salmon Valley.

The history of agricultural development and forest management within the lower White Salmon River Valley has resulted in a predominance of early successional plant communities. Although there are a number of individual old

oak trees within and near the boundary, almost none of the forest stands within the boundary exhibit old growth characteristics, that is, large trees, down logs, snags, and a multi-layer canopy. One small stand of trees, presently in federal ownership, is beginning to develop these characteristics. Because of its scarcity, this stand is very important in this area.

Despite the lack of systematic archaeological fieldwork in the White Salmon River valley, four important Native American Indian sites are known. One ethnographic site has been recorded in the Husum area, an area reported to have been a significant fishery prior to the scouring of the river by log transportation and the construction of Condit Dam. Many more significant spiritual and prehistoric sites are likely to be present.

Whitewater boating is the principle recreation use occurring in the area. The White Salmon River is considered one of the premier day-use, whitewater rivers in the region and whitewater recreation was found to be one of the outstandingly remarkable values of the river area. Important features which make it so include the spectacular nature of the vertical-walled canyon (appearance of naturalness and isolation), the frequency of exciting class 2+ to class 3+ rapids, the relative closeness to the Portland-Vancouver metropolitan area, and the fact that the river sustains boatable flows throughout the summer. Although the river is not considered to be overcrowded at this time, if use trends of the past five years or so continue, it could become so in the fairly near future.

The land within the existing Wild and Scenic River boundary is almost all in private ownership. Not counting state and county road rights-of-way, just under 98% of the land is privately owned, and the remaining 2% is recently acquired federal lands. Almost 40% of the private land within the boundary is owned by a single landowner, SDS Lumber Company. The land in the lower White Salmon valley currently supports the following uses:

Buildings	7%
Agricultural lands	27%
Non-agricultural openings	6%
Forest stands	59%

The interplay of these various uses, particularly agricultural lands and forest stands, is what gives the lower White Salmon valley the rural or pastoral character which is so admired by residents and visitors alike. This field and forest mosaic is quite different from the appearance of the bank lands along the river, which, in most places is enclosed by a steep, narrow gorge and/or dense, natural-appearing vegetation.

OUTSTANDINGLY REMARKABLE VALUES

The Wild and Scenic Rivers Act requires that the values which caused a river to be included in the National Wild and Scenic River System must be protected and enhanced. These values are called "outstandingly remarkable" and are determined by comparing the resources of the river under study with the resources of other rivers in the region. The region, in this case, was generally considered to be the Columbia River Gorge area between the Cascade range on the west and the Columbia Plateau to the east, including all rivers draining into the Columbia River from the Sandy River to the Umatilla.

The lower White Salmon River was determined to have five outstandingly remarkable values. They include:

- **Whitewater Boating** - This river is one of the few rivers in the region that has Class 3 rapids (moderately difficult) located in a natural setting and is runnable nearly year-round because of the river's sustained flow levels.
- **White Salmon River Gorge** - This gorge, which extends from the Trout Lake valley to well below BZ Corner, is the longest vertical wall gorge in the region. It is noteworthy because of its natural character, bedrock geology, caves, and numerous falls and springs.
- **Hydrology** - This includes sustained flows, springs, and waterfalls. The sustained and

reliable flows throughout this river segment, resulting from glacial runoff augmented by many springs flowing into the river, are rare in the region and benefit fish, recreation, and irrigation.

- **Native American Indian Longhouse Site and Cemetery** - Located near Rattlesnake Creek, this site is one of the earliest locations for Washat ceremonies and is particularly important because of its religious significance to the Yakima Indian Nation.
- **Resident Fish** - This river segment has one of the three best resident trout fisheries in the region, based on fish size and abundance. The most important species are rainbow trout and eastern brook trout.

WILD AND SCENIC RIVERS ACT AND GUIDELINES

Section 13(c) of the Columbia River Gorge National Scenic River Act amended the Wild and Scenic Rivers Act by adding the White Salmon River to the National Wild and Scenic Rivers System. The Wild and Scenic Rivers Act provides the overall legal authority and requirements for planning and management of rivers which are components of the National Wild and Scenic River System. The first part of Section IV of this Management Plan contains a brief synopsis of the important provisions of the Wild and Scenic Rivers Act and of the "National Wild and Scenic River System; Final Revised Guidelines for Eligibility, Classification, and Management of River Areas."

IMPORTANT RELATIONSHIPS

RELATIONSHIP TO THE FINAL EIS AND THE RECORD OF DECISION

This Plan sets forth the direction for managing the land within the boundary of the White Salmon River National Wild and Scenic River. The Plan is the result of extensive analysis of the outputs and effects of a range of alternatives which is documented in the accompanying Final EIS. A concise statement of exactly what alternative was decided upon and the reasons why that

alternative was chosen are included in the Record of Decision.

This Plan is based on the Preferred Alternative contained in the Final EIS. It augments that alternative by including a schedule of probable implementing activities and a monitoring plan.

RELATIONSHIP TO SITE-SPECIFIC PROJECT PLANS AND INTERMEDIATE ANALYSES

The management direction provided by this Management Plan comprises the framework within which site-specific activities and projects will be planned and implemented. The National Scenic Area staff will perform environmental analyses on all projects and activities not addressed in the Plan which are likely to cause environmental effects. These project environmental analyses will be conducted in accordance with the National Environmental Policy Act (NEPA) requirements.

Some intermediate analyses will be conducted to guide management activities for certain resource management situations or areas. Examples of such situations and areas include comprehensive interpretation of cultural resources, and relationships of plant communities on federal lands.

RELATIONSHIP TO THE COLUMBIA RIVER GORGE NATIONAL SCENIC AREA

The Act which created the Columbia River Gorge National Scenic Area also designated the White Salmon River as a component of the National Wild and Scenic Rivers System. However, from a management direction standpoint, there is little relationship between the two areas. The Acts which govern the planning and management for each area are completely separate, their physical areas do not overlap in any way, the planning processes for each were independent, and the management direction for each is totally different. The primary relationship between the two areas is that the Special Management Area of the National Scenic Area and the White Salmon River are both administered by the U. S. Forest Service through the Area Manager of the Columbia River Gorge National Scenic Area.

RELATIONSHIP TO THE GIFFORD PINCHOT NATIONAL FOREST

The Columbia River Gorge National Scenic Area Act directed that the White Salmon National Wild and Scenic River would be administered by the Secretary of Agriculture, and such administration is delegated to the Forest Service. The White Salmon River is not within the boundary of any national forest, so the lands which the Forest Service acquires within the boundary do not officially become part of any national forest. Instead, they are classified as National Forest System (NFS) lands. However, since it is located closest to the Gifford Pinchot National Forest, the NFS lands within the wild and scenic river boundary will be considered part of the Gifford Pinchot National Forest for reporting purposes. These lands will also come under the umbrella of the Gifford Pinchot Land and Resource Management Plan (LRMP).

For a number of reasons, the White Salmon Wild and Scenic River was not addressed in the Gifford Pinchot National Forest LRMP. However, when the LRMP for the Gifford Pinchot National Forest is amended or revised, the management plan which is part of this document will be incorporated.

RELATIONSHIP TO THE CONDIT DAM RELICENSING PROJECT

Condit Dam, located at river mile 3.3, was constructed in 1913. The dam is owned and operated by PacifiCorp Electric Operations. PacifiCorp is currently in the process of applying to relicense the dam. The Forest Service, along with other federal and state agencies, is providing information to help in that decision-making process. The two key issues which relate to the management of the White Salmon National Wild and Scenic River are:

- **Reintroduction of anadromous fish into the river above the dam.** Although this has the potential to create a new outstandingly remarkable value, depending on the specific details of the reintroduction plan (species, numbers, etc.), it could have effects on existing OR values of resident fish and whitewater recreation.

- **Recreational use of the river.** The take-out for the majority of the whitewater trips on the river is located at the head of Northwestern Lake, on land owned by PacifiCorp. The take-out and sanitation facilities which have been provided there by Pacificorp have played a key role in the success of recreational use of the river in the past, and are counted on to continue in the future.

Cutting across both issues is the possibility of removal of Condit dam. If this were to happen it would automatically mean that anadromous fish would again use the designated portion of the White Salmon River. It would also return the lower 5 miles or so of the White Salmon River (downstream to the Bonneville Pool of the Columbia River) to a free-flowing condition, probably with significant whitewater boating opportunities.

The Forest Service will continue to provide information on the potential effects of relicensing on Wild and Scenic River values and management. In addition, depending on the outcome of the relicensing process, this Management Plan may need to be amended or revised to take into account any new conditions which result from the final decision.

RELATIONSHIP TO THE YAKIMA INDIAN NATION

Treaty Rights

The members of four tribal governments exercise reserved treaty fishing rights at "usual and accustomed" fishing sites on the Columbia River and its tributaries. These reserved rights are specifically addressed in the treaties of 1855 with the Confederated Tribes and Bands of the Yakima Indian Nation (Treaty with the Yakimas, June 9, 1855, 12 Stat. 951), the Confederated Tribes of the Warm Springs Reservation of Oregon (Treaty with the Tribes of Middle Oregon, June 25, 1855, 12 Stat. 963), the Confederated Tribes of the Umatilla Reservation of Oregon (Treaty of June 9, 1855, 12 Stat. 945), and the Nez Perce Tribe of Idaho (Treaty with the Nez Perce, June 11, 1855, 12 Stat. 957).

It is important to note that these rights were reserved by, not granted to, the treaty tribes. In essence, the "right of taking fish at all usual and accustomed places" guarantees that members of the treaty tribes shall have the right of access to, and fishing from, all salmon and steelhead-bearing locations on the Columbia River as well as its tributaries. Although the anadromous runs were exterminated on the White Salmon River above the Condit Dam shortly after the dam's construction in 1914, the right to fish was not extinguished. That would have required an Act of Congress.

There is documentary evidence that the White Salmon River up to Husum Falls supported a traditional fishery (Lane, Lane and Nash 1981). The topography and flow of the river at Husum is consistent with other known places of dipnet fishing, such as the Klickitat River above Lyle and Sherars Falls on the Deschutes River.

Since the White Salmon River is within the ceded lands of the Confederated Tribes and Bands of the Yakima Indian Nation and Husum Falls has been documented as a usual and accustomed fishery, the treaty right to fish survived the loss of the anadromous fishery in the White Salmon River. If anadromous fish are introduced into the river above Condit Dam, it will be necessary to accommodate the exercise of treaty fishing rights at Husum Falls and other places on the river.

Other rights reserved in the treaties of 1855 include erecting temporary buildings for curing fish, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land.

There are no known or implied treaty-reserved, off-reservation water rights of the Yakima Indian Nation on the White Salmon River. If such rights potentially exist, they have not been adjudicated.

Traditional Uses

A comprehensive oral history, archival and site inventory has not been completed. Therefore, the extent and location of areas traditionally considered sacred or spiritual is unknown.

Likewise, other areas used for gathering traditional food and medicinal plants, as well as raw materials for practices such as basket-making, remain unknown.

While there is no specific documentary evidence of gathering traditional foods within the designated river corridor, archival and oral history research is likely to reveal such use. Throughout the planning effort, Native American Indian representatives on the Task Force stressed the importance of this area for traditional ceremonial, spiritual and gathering uses (Jackson & Speedis, 1989). Husum was the site of an ethnographic village, and a large number of Indian Homestead Allotments were granted to Native American Indians in this area. This past activity indicates that the area had the ability to sustain a large sedentary population from the natural resources at hand. The extensive modification of the valley over the last 100 years has had a significant effect on local natural resources, such as camas.

Important Cultural Sites

Despite the lack of systematic archaeological fieldwork in the White Salmon River valley, four important Native American Indian sites are known. Many more significant spiritual and prehistoric sites are likely to be present. Areas of traditional use are also likely to be documented in the event of archival and oral history research.

Informal archaeological fieldwork has been conducted in the area since 1983. One ethnographic site has been recorded in the Husum area. Several others were discovered, but unrecorded, through this informal fieldwork.

The reported ethnographic site of the Klickitat at Husum Falls has not been located or formally recorded. This area is reported to have been a significant fishery prior to the construction of Condit Dam.

One result of the archaeological survey was that two previously unrecorded sites, one prehistoric and one historic, were discovered and recorded. The historic site appears to be the remnants of a recent structure. The prehistoric site appears to represent a campsite and tool-manufacture site (Masten and Galm, 1989).

Previously-known sites include the Indian Homestead Allotment of Jacob Hunt, a contemporary of Smohalla of Priest Rapids, and the historic Indian cemetery that contains his remains. This cemetery is still in use. The Jacob Hunt site is a significant property which will require additional research to fully document its significance to the local Indian people and the Yakima Indian Nation, as well as to the history of the area.

RELATIONSHIP TO WASHINGTON STATE AND KLIICKITAT COUNTY

Since so much of the land in the Wild and Scenic River boundary is private, county and state laws and regulations apply. Therefore, administration of the river area will actually result from a combination of county, state, and federal authorities. Beginning on page 1 of Section III of this plan, the discussion on administration covers many of the important aspects of the relationship with the state and county. In addition, Section IV covers in more detail the regulations included in the Klickitat County Zoning Ordinance and Shoreline Management Plan. Section IV also identifies the additional state and county (as well as federal) authorities which have a bearing on administration of the river area.

RELATIONSHIP TO THE UPPER WHITE SALMON RIVER (STUDY PORTION)

The Act which established the Columbia River Gorge National Scenic Area and designated the lower White Salmon River as a component of the National Wild and Scenic Rivers System also designated the upper White Salmon River as a "study river." The study of the upper portion of the river has gone on concurrently with the management planning for the lower portion of the river. The study will conclude with a determination of whether the upper river is suitable for inclusion in the Wild and Scenic Rivers System, and a recommendation to Congress about whether it should or should not be designated as a component of the System. If the recommendation is that the upper river should be designated, it is the intent of this plan that a portion of that recommendation be for Congress to direct that the river be administered as a single unit rather than as two separate components. However, administration of the river will follow whatever it is that Congress directs. If the upper river is designated, this plan will be revised as needed to comply with congressional direction or address administration of the river as whole.

SECTION II

**MANAGEMENT
DIRECTION**

SECTION II

MANAGEMENT DIRECTION

INTRODUCTION

This chapter provides overall direction for the management of the White Salmon National Wild and Scenic River. This direction is in the form of goals, desired conditions, and standards and guidelines. It is organized into two major sections - management direction which generally applies to the whole area within the boundary, and management direction which applies to specific geographic areas (management areas).

OVERALL GOALS

- The overall goal of management of the river area is to meet the intent of the Wild and Scenic Rivers Act for a scenic river by maintaining the current character of the river area, and providing long-term protection and enhancement of its outstandingly remarkable values.

In addition, early in the planning process, four additional broad goals or themes were developed as a result of public involvement. They include:

1. Maintain and enhance the economic viability of existing resources uses and respect private property and tribal rights.
2. Conserve and enhance instream biological and physical resources such as fish and their habitats, water quantity, and water quality.
3. Provide for appropriate recreational use and appropriate public access.
4. Conserve and enhance land-based biological and physical resources such as plants, animals, canyon ecology and diversity of species, historical and archaeological resources, and scenic quality.

The management direction in the following section flows directly from these overall goals and themes and is a result of the search for a solution which provides the best synthesis of them all.

MANAGEMENT DIRECTION WHICH APPLIES TO THE WHOLE AREA

This section provides the management direction for resources or portions of resources which are not limited to a single management area. Instead, the management direction in this section is applicable in several management areas or throughout the whole area within the boundary. In the case of cultural resources, virtually all the management direction applies throughout the whole area. For many of the other resources, part of the management direction applies to the whole area, and is included in this section, while other parts are specific to certain management areas and is included there. In some cases, none of the management direction applies to the area as a whole - it only applies in specific management

areas. For those resources, none of the management direction is included in this section.

BIOLOGICAL DIVERSITY

Level of Protection

1. Maintain or enhance levels of biological diversity which presently exist within the boundary.
2. Maintain or enhance habitats of plant and animal species on the Region 6 Sensitive Species List which are known or suspected to exist within the boundaries of the wild and scenic river.

Inventories

1. Before any new ground-disturbing activity (development, forest practice, agricultural practice, etc.) is initiated within the boundaries on lands on which any species on the Region 6 Sensitive Species List is likely to be present, assure that an on-the-ground inventory of the proposed development area which would have discovered any such species has been performed.
2. Undertake studies within the White Salmon River Valley and other appropriate valleys in the region, to determine whether biological diversity is an outstandingly remarkable (OR) value of the wild and scenic river area of the White Salmon River Valley, and, if it is, what specific aspects of biological diversity can be effectively protected and enhanced through wild and scenic river management.

Species Introduction

1. Prevent introduction of non-native plant or animal species that could adversely affect existing native plants and animals. Exceptions are agricultural crops and species introduced under an approved integrated pest management plan.

CULTURAL RESOURCES

Goals

Identify all cultural resources of significance within the wild and scenic river area, and assure that each is protected to the level required by law. Provide interpretation of appropriate sites in a way which does not jeopardize their protection. Facilitate acquisition, by appropriate agencies or parties, of sites which would otherwise be threatened.

Standards and Guidelines

Inventory

1. As soon as possible, compile a comprehensive and systematic oral history and archival inventory (search of literature and unpublished records) of all sites,

- including traditional & spiritual uses, within the White Salmon River drainage.
2. Perform on-the-ground surveys on all public lands within the boundary.
3. On private lands within the boundary, perform on-the-ground surveys (at Forest Service expense) on areas with moderate to high probability of containing cultural resources in response to project proposals, if provided for in Klickitat County and state review process.

Evaluation

1. Using existing program eligibility criteria and guidelines, evaluate cultural sites identified in the inventories (historic, prehistoric, spiritual, and other areas of traditional uses) for significance.
2. Sites determined to be significant are outstandingly remarkable values.

Protection/Acquisition

1. For each site which is significant, develop a plan that assures its protection.
2. Monitor significant sites.
3. Prioritize and acquire (or facilitate acquisition of) threatened significant cultural sites (by Forest Service, Bureau of Indian Affairs, Yakima Indian Nation, State of Washington, Klickitat County, private conservation organizations, etc.).

Interpretation/Enhancement

1. Develop an overall interpretive plan that addresses both on- and off-site interpretation for all types of cultural sites represented within and adjacent to the river boundaries.
2. Includes an off-site interpretive facility for public information and education in Husum.
3. Facilitate traditional use of the longhouse site.

RECREATION

Interpretation/Information

1. Continue to provide river map/guide at the BZ Corner put-in, Husum Falls, and the take-out at Northwestern Lake. Add information which would:

- (a) address private land ownership (stressing no trespassing and low impact to private lands from littering, and noise, etc.);
 - (b) encourage low-impact recreation and protection of resource values;
 - (c) address boating skill levels, safety concerns, portaging Husum Falls, procedures at the take-out, and respect for other user groups; and
 - (d) provide information about other recreation opportunities, and encourage additional recreation use to take place, outside the boundary.
2. Assign a knowledgeable person to be present along the river at busy times to provide safety information, answer questions, etc.
 3. Provide interpretation/education opportunities and trails at points of interest, such as the falls above the launch site, Spring Creek, the conifer/oak stands along Oak Ridge Rd., the launch site, the take-out, and possibly a facility in the Husum area.
 4. Develop an off-river environmental education program and interpretive trail in conjunction with the white oak management and old-growth area on the eastside of the river above Husum.
 5. Provide for interpretation of historic structures along the river, for example, the old water turbine.

Dispersed Areas

1. Monitor interactions and conflicts between various types of recreationists (whitewater users, anglers, hikers, vehicle users, horseback riders, etc.), and between recreationists and private landowners.
2. Monitor lands for resource damage caused by recreationists.
3. If conflicts or resource damage become significant, institute measures to control conflicts and damage, including use restrictions, gates, etc., if necessary (because it is an outstandingly remarkable value, whitewater boating is the priority use if conflicts arise with other recreationists).
4. Cooperate with landowners to discourage recreationists from trespassing, littering,

and committing acts of vandalism, or other activities which conflict with private landowner's rights.

Trails

1. Cooperate with Washington Department of Transportation to develop a bicycle path along Highway 141 between Husum and BZ Corner.

Developed Sites

1. Assure that sanitation, picnic facilities, river viewpoints, and parking are available to the public, in appropriate amounts, at the put-ins and take-outs at BZ Corner, Husum, and Northwestern Lake.
2. Provide two picnic sites, one above and one below Husum (probably at RM 9.6, the old Hendrix [Héarn] Homestead and RM 6.5, Spring Creek), which are accessible to the public from the river. Allow road access to these sites only for maintenance.
3. All improvements are to be "rustic" and not visually intrusive.
4. Do not provide a developed campground within the boundary.

CHARACTER OF THE RIVER

1. Assure that all new activities or developments within the boundary are not evident as seen from the river (the visual quality objective [VQO] is retention). (See Management Area 5 for an exception to this VQO in Husum.)
2. Exceptions to the VQOs are where recreation facilities called for in this plan cannot be built and still meet the VQO, in which case, the facility must be designed to harmonize with the environment to the extent practicable.
3. Encourage landowners to reduce visibility of existing structures, as seen from the river, with vegetative screening, color change, change in materials, etc., and provide technical assistance as appropriate.
4. Contact the U.S. Air Force, the U.S. Navy, and the Federal Aviation Administration to attempt to reduce any adverse effects of the low altitude Military Training Route located in the White Salmon River corridor.

ROADS AND BRIDGES

1. New roads within the boundary must not be visible from the river.
2. Construct and treat roads so there is no erosion which enters the river.
3. Revegetate cut and fill slopes immediately.
4. Allow existing roads and bridges to be maintained or replaced in the same general location.

AGRICULTURE AND FORESTRY

1. Work with the state and county to insure that pesticides and herbicides are used in accordance with state and federal regulations.
2. Encourage the use of integrated pest management where that can be used successfully to reduce dependence on pesticides and herbicides.
3. Through technical assistance, incentives, and other available means, work with landowners if needed for protection of natural resources, particularly where existing uses are causing adverse effects.
4. Through technical assistance, incentives, and other available means, work with and support the county and private landowners (if requested) to maintain the rural character of the area, to manage woodlands, and to meet the intent of the Klickitat County Comprehensive Plan and Zoning Ordinance in the Rural Center and the Resource Lands zones.

5. On federal land, assure that all proposals that involve vegetative manipulation of tree cover for any purposes comply with the seven requirements found in 36 CFR 219.27(b)
6. Do not use clearcutting or even-aged management on federal land.

OTHER USES

1. Prevent development which would have a serious adverse effect on national wild and scenic river values, especially water quality.
2. Allow other uses outside the buffer which promote conservation of farm and forest operations, maintenance or creation of biological diversity, and protection and enhancement of other wild and scenic river values (such as fish and wildlife habitat improvements, watershed protection areas, hunting preserves, etc.).
3. Prevent uses which do not promote such values (such as airports, condominiums, RV parks, airstrips, transfer stations, feed lots, hazardous waste generating facilities, gravel operations, etc.).
4. Encourage new utility developments to locate outside the boundaries if practicable. If that is not feasible, locate and design new utility installations to have the least adverse effect on wild and scenic river values as possible.

MANAGEMENT DIRECTION FOR GEOGRAPHIC MANAGEMENT AREAS

This section provides management direction for specific geographic areas. The area within the boundaries is subdivided into five management areas because the management direction is different for each area. The five management areas are:

1. The White Salmon River channel
2. The buffer
3. Federal lands outside the buffer
4. Private lands outside the buffer and outside the rural centers

5. Private lands outside the buffer but within the rural centers.

It is essential to remember that full management direction for each management area includes the direction which applies to the whole area as well as that contained in the sections that follow

MANAGEMENT AREA 1 WHITE SALMON RIVER CHANNEL

Location

This management area includes the surface of the White Salmon River, the water within the channel, and the river channel itself, generally up to the ordinary high water mark.

Desired Condition

Water quantity, throughout the year, would be the same as it was when the river was designated, which is adequate for whitewater boating, fish habitat, and the hydrologic processes of the gorge. The river would be in a free-flowing condition as defined in the Wild and Scenic Rivers Act. Shoreline facilities such as pump houses, spring boxes, etc., would be relatively inconspicuous to boaters on the river, and there would be an absence of litter, both in the river and on the banks. Historic river-related structures existing in the summer of 1991 would be still in place. Water quality would be at least as high as in the summer of 1991. Fish habitat would be in good condition and populations of fish strong and healthy. There would be an increase in large woody debris over what existed in the summer of 1991, but not in locations where it compromises the safety of boaters.

With the exception of a few days on which there are special events such as Husum Days, whitewa-

ter boating would occur in such a manner that the participants perceive no more than low to moderate levels of crowding. Measures used to assure these perceptions would be unobtrusive and rely primarily on voluntary cooperation of users. Every person desiring to float the river, whether with a commercial guide or as a private boater, would have an equal opportunity to do so. Boaters would not have to compete for a permit to run the river. There would be enough commercial guides to serve those desiring to float the river with a guide, but not so many that a viable business opportunity would not be available for individual guide companies. White-water boating would take place in a manner that is as safe as possible, given the inherent risks of the activity, and with a minimum of overt regulation. When accidents do occur, search and rescue operations would be swift and efficient. Boaters should respect the rights of private land owners and would not trespass or unnecessarily disturb them.

Standards and Guidelines

Instream Flows

1. Work towards establishing instream flows at existing levels, preferably using State of Washington processes.
2. Install a gauge for measuring water levels - at Husum.

3. Assure that daily water-level information can be obtained on a call-in basis.

Stream Character

1. Deny consent to the issuance of any Federal license, permit, or other authorization for a federally assisted water resources project that would have a direct and adverse effect on the values for which the river was designated.
2. To the extent consistent with maintenance of a free-flowing river, utilize the existing Washington Department of Wildlife hydraulics permitting process for any work below the ordinary high water line that will use, divert, obstruct, or change the natural flow or bed of the river.
3. With the consent of the owners, reduce intrusion of existing structures if desirable and practicable.
4. Allow new structures or modifications that do not adversely affect river values.
5. Allow limited removal of woody debris for river runner safety and protection of streambanks after an analysis concludes that wild and scenic river values would be protected.
6. Sponsor an annual river clean-up aimed at litter and debris that is in, may move into, or is visible from the river.
7. Coordinate with Klickitat County to insure that litter regulations are adequate and enforced.
8. Do not allow removal of historic river-related structures. Keep for interpretive purposes.

Water Quality

1. Monitor water quality through a cooperative monitoring program developed with Washington Department of Ecology (DOE) and Underwood Conservation District.
2. If existing water quality meets or exceeds State water quality standards, assist DOE in enforcement of the existing State non-degradation policy.
3. If existing water quality does not meet State water quality standards, cooperate with DOE and the Underwood Conservation District to improve water quality through a technical assistance program.

4. Coordinate Washington State, Klickitat County, Southwest Washington Health District, Underwood Conservation District, Soil Conservation Service, Forest Service, and landowners in assuring adequate septic system design, setbacks, and maintenance, and in improving practices if they are currently degrading water quality and quantity.

Fisheries

1. Cooperate with the Washington Department of Wildlife in fish protection projects and fish population monitoring.
2. Recommend to the Washington Department of Wildlife to adopt strong harvest regulations to protect resident fish populations, including such things as catch and release, barbless hooks, no bait, restricted seasons etc.
3. Assure that there is no degradation of fish habitat.
4. Provide input during the sub-basin planning process and Condit Dam relicensing process to assure that wild and scenic river values are protected in decisions affecting anadromous fish reintroduction.
5. Amend or revise this Management Plan, with task force involvement, if it is decided to reintroduce anadromous fish above Condit Dam.

Whitewater Boating

Experience Opportunities

1. Provide a "roaded natural" social experience (low to moderate perceptions of crowding).
2. Exempt "Husum Days" from crowding requirements, as well as other specific events permitted in the future on a case-by-case basis to be determined by the Forest Service.
3. Assure that events are run so that commercial outfitters/guides are able to operate on event days.
4. Limit motorized watercraft to Northwestern Lake.

User Capacities

1. Use a Limits of Acceptable Change (LAC) process, which includes a balanced group

- consisting of members of the commercial and private boating communities and others interested in the use of the river, to establish indicators and standards for acceptable social and physical conditions.
2. Monitor social and physical conditions as part of the LAC process and focus, as a minimum, on the following indicators:
 - (a) The number of watercraft waiting to portage Husum Falls.
 - (b) Forced waiting time at Husum Falls.
 - (c) Waiting time at the take-out.
 - (d) Percent of time other parties are seen along the river.
 - (e) Perceptions of crowding along the river, at Husum Falls, and the take-out.
 - (f) Reported accidents, "near misses," and safety complaints.
 - (g) Conflicts with other users of the river corridor (landowners and land-based recreationists).
 - (h) Deterioration of sites where boats are landing (human waste, exposed soil, damaged vegetation, litter, etc.)
 3. In addition, monitor the following to determine the relationship, if any, between them and the indicators:
 - (a) Party size of each launch.
 - (b) Number of watercraft by type (commercial, private, raft, kayak, etc.) for each party.
 - (c) Elapsed time for each launch, and the interval between launches.
 - (d) Forced waiting time at the launch site.
 4. Determine perceptions of river crowding, and user preferences for various management actions which could be used to alleviate problems and concerns, through current user surveys and questionnaires.
 5. Annually review the monitoring and survey results with the Task Force.
 6. At least annually, schedule a meeting with representatives of the various groups using the river.
 7. Maintain social and physical conditions within the desired standards through information, education, voluntary actions, self-registration, or other relatively unobtrusive management actions.
 8. If the above methods fail to keep the standards from being exceeded, limit use to a level at which the standards are not exceeded using a method which meets the following criteria:
 - (a) Each person who wants to boat the river, whether with a commercial outfitter/guide or as a private boater, will have an equal opportunity to boat the river.
 - (b) Use will be distributed, during time periods when social standards are expected to be exceeded, by scheduling launches at predetermined intervals and limiting the number of watercraft and people per launch, rather than establishing a permit system.
 - (c) A portion of the total use will be available for "walk-ins" (people who decide to boat the river within 48 hours of the time they make the trip), whether they are private boaters or people who want to boat the river with a commercial outfitter/guide. The portion available for this group will be proportionate to the size of this group compared with all the people who desire to boat the river (approximately $\frac{1}{4}$ to $\frac{1}{5}$ in 1990). (For example: a number of launch slots could be reserved for private "walk-ins" and commercial "walk-ins", the number of each being proportionate to demand. Distribution of the commercial "walk-in" use among the commercial outfitters/guides could be based on use ratios occurring during the preceding 3-year period.).

Permits

1. Do not establish a permit system unless non-permit methods for managing use which meet the above criteria are unsuccessful in practice, and it is concluded that a permit system is the only way to maintain acceptable conditions.
2. If a permit system does become necessary, use the first criterion, above, as a goal, and establish some form of a "freedom of choice" permit system.

3. Issue commercial special use permits to a total of 10 commercial outfitters/guides based primarily on historical use, performance, and geographic distribution (in order to provide services to a large number of potential boaters, it is desirable to have guiding companies located in the following areas - local White Salmon River area, Seattle area, Portland/Vancouver area, and Eugene/Springfield area).
4. If, when this plan is approved, there are more than 10 commercial outfitters/guides under permit, do not issue any more permits, and reduce the number of permits to 10 through attrition.

Safety

1. Develop a safety plan with county, state and federal participation.
2. Negotiate agreements with landowners for access to the river at key locations for search and rescue operations.
3. Provide a sign warning boaters that they are approaching Husum Falls.
4. Improve the portage trail to create a safe trail surface using natural materials.
5. Use the commercial special-use permit system to ensure that commercial operators are qualified, insured, have the necessary safety equipment, and have been adequately trained in first aid and river rescue.
6. Implement a mandatory self-registration system for private boaters to ensure that they are exposed to safety information and the need for proper safety equipment.
7. Develop a protocol between the county, state, and Forest Service that addresses intoxication and use of life jackets on the river, discharging firearms across the river, and local availability of rescue expertise and equipment.

River Access

1. Do not increase existing capacity.
2. Limit commercial cable launch sites at BZ Corner to a maximum of two, only one of which provides public access.
3. Assure that facilities providing public access are safe, reasonably priced, and provide good public service, preferably through cooperation with the owner/operator of the launch.
4. Do not allow additional private launch facilities.
5. Cooperate with Pacific Power to assure that an adequate public take-out is located at the head of Northwestern Lake.
6. At Husum Falls, do not provide improvements unless needed for safety or to prevent resource damage at the take-out above the falls, the portage, and the put-in below the falls.
7. Provide a put-in near Rattlesnake Creek.
8. Improvements are to be "rustic", not visually intrusive, and should not increase boating capacity nor encourage more use.
9. Accessibility for persons with disabilities will be at challenge level 3 ("most difficult" - totally unmodified for people with disabilities), except, at the put-in near Rattlesnake Creek and the takeout at Northwestern Lake, it will be at challenge level 2 ("more difficult" - usable by the more athletic person with a disability without assistance, but generally, a person with limited mobility would probably need assistance).

MANAGEMENT AREA 2 THE BUFFER

Location

The buffer consists of two strips of land located adjacent to the ordinary high water mark (OHWM) of the White Salmon River. Outside the rural centers the strips are 200' wide on each side of the river. In BZ Corner, the strips extend from the OHWM to a point 20' beyond the rim of the gorge, but not exceeding 200' wide on each side of the river. In Husum, the strips are 100' wide on each side of the river. All distances are measured horizontally from the OHWM.

Desired Condition

Except where there are developments (such as residences, trailer pads, picnic sites, etc.) or agricultural fields which existed during the summer of 1991, the vegetation in the buffer is generally undisturbed and consists of species which occur naturally in the area. The vegetation is either in a late successional stage, or is becoming so. The vegetation is dense enough that it serves as a visual screen so developments outside the buffer are not evident from the river. Outside the rural center, the buffer is commonly being used by wildlife as a travel corridor.

There are no new residential or commercial developments, new agricultural fields, or other new development activities except for a few new recreation facilities which are approved in this plan. Developments and agricultural fields which existed in the summer of 1991 are still present (unless the owners had decided to eliminate them), but residences which had serious adverse effects on the river, have had the adverse effects reduced or eliminated, or are gone. There is a lack of litter, no areas where vegetation is being damaged or soil being exposed as a result of excessive recreation use, and little or no evidence of trespass or vandalism.

Standards and Guidelines

Biological Diversity

Level of Protection

1. Develop specific plans for management of biological resources within the buffer.
2. Maintain or enhance habitats of management indicator species for mature and overmature successional stages (pileated woodpecker).
3. Protect the following specifically identified special plant communities within the buffer: old-growth communities, replacement old-growth stands, canyon ecosystems, riparian habitat, and wetlands.
4. Until the determination of whether biological diversity is an outstandingly remarkable (OR) value has been made, manage the buffer as if biological diversity is an OR value.

Inventories

1. Within the buffer, perform biological inventories as soon as possible to assist in developing specific management direction for each biological community, and to discover any new plant or animal communities of special concern.

Recreation

1. Maintain a physical setting adjacent to the river which is managed as "semi-primitive" (moderate to high perceptions of naturalness and isolation).
2. Assist in the development of a short trail from the launch site in BZ Corner to the falls upstream.

Character and Scenery

1. Manage the buffer as an area of generally undisturbed natural vegetation on each side of the river.
2. Allow no new residential or commercial developments (including septic system drainfields and signs) or other new development activities except for safety

and recreation facilities approved in this plan.

3. Do not manipulate vegetation in the buffer unless needed to manage crops in existing agricultural fields or orchards, for safety, to protect property, to reduce serious fire hazards, to provide minimal filtered views to the river from residences, to create biological diversity, to construct approved recreation facilities, to control noxious weeds or the buildup of harmful insects or diseases (consistent with maintaining biological diversity), or to otherwise maintain or enhance desired national scenic river characteristics.
4. Do not affect existing uses, such as agricultural fields, orchards, residences, picnic sites, trailer sites, etc., unless they are causing adverse effects on river values and landowners consent to modifying these uses.
5. Purchase existing residences within the buffer, at landowner's request, based on availability of funds and priority.

Roads and Bridges

1. Allow no new roads in the buffer
2. Allow no new bridges over the White Salmon River.
3. Coordinate with the State of Washington and Klickitat County to reduce highway hazards at Husum.

Grazing

1. Prevent grazing on federal lands unless needed as a tool for managing regeneration and vegetative competition in white oak stands, or for other specific uses which maintain or enhance biological diversity.
2. Build and maintain fences at federal expense where necessary to control livestock.
3. Consider and mitigate long-standing livestock watering needs on lands which may be cut off from the river by lands which become federally owned.

Agriculture (Including Orchards)

1. Prevent new agricultural clearings within the buffer.
2. Allow existing agricultural uses to continue unless they adversely affect water quality.

Forestry

1. Do not harvest timber in the buffer unless needed for safety, to protect property, to reduce serious fire hazards, to provide minimal filtered views to the river from residences, to create biological diversity, or to otherwise maintain or enhance desired wild and scenic river characteristics.
2. Allow area to revert to a generally natural condition.

MANAGEMENT AREA 3 FEDERAL LANDS OUTSIDE THE BUFFER

Location

This management area includes all lands which have been acquired in fee by the federal government, which are within the boundary but outside the buffer. Lands within this management area are not necessarily contiguous and may be located in various parts of the area. New lands which are acquired in fee in the future will become part of this management area as soon as they are owned by the federal government. It is assumed that all lands owned by SDS Lumber Company in the summer of 1991 that are within the Wild and Scenic River Boundary will become federal lands through an exchange. This management area will probably also include some other lands which are acquired from other willing sellers. Most of these lands are more than 200 feet from the river.

Desired Condition

Healthy stands of Oregon white oak are present in abundance. Some stands are pure oak, but most are mixed with ponderosa pine and Douglas fir. Some manipulation of conifer trees (including such things as small harvest units and girdling) occurs when needed to protect or enhance the Oregon white oak stands. To the extent compatible with maintaining stands of Oregon white oak, mature and overmature stands sufficiently large for the maintenance of the pileated woodpecker are present. Wetlands and riparian areas are functioning effectively. All lands within this management area have received biological inventories, and unusual plant and animal communities which contribute to any special biological diversity of the area have been identified and protected.

A few short, interpretive trails are located in the area, but not near the river. Use of the trails is primarily by hikers. There is little resource damage occurring, or conflict between different groups of recreationists, because little recreation

use takes place other than on the trails. Few roads are still in existence, and there are few or no cattle grazing in the area.

Standards and Guidelines

Biological Diversity

Level of Protection

1. Develop specific plans for management of biological resources on federal lands.
2. Maintain or enhance habitats of management indicator species for mature and overmature successional stages (pileated woodpecker).
3. Protect the following specifically identified plant communities: old-growth communities, replacement old-growth stands, canyon ecosystems, riparian habitat, and wetlands.
4. Until the determination of whether biological diversity is an outstandingly remarkable (OR) value has been made, manage all federal lands within the boundary as if biological diversity is an OR value.
5. Use vegetation management (including timber harvest) where needed to perpetuate specifically identified white oak communities, assuring the presence of mature and old-growth stands so as to provide for diversity of age classes and tree species mixes within the White Salmon River valley.

Inventories

1. Perform biological inventories as soon as possible after land acquisition, to assist in developing specific management direction for each biological community, and to discover any new plant or animal communities of special concern.

Cultural Resources

1. Facilitate re-establishment of the long-house site for traditional use.

Recreation

Dispersed Areas

1. Provide "roaded natural" recreation opportunities.
2. Do not encourage recreation use off the developed trails.
3. Obliterate roads on federal lands which are not needed for administrative purposes or trails - gate if necessary.
4. Monitor lands for resource damage caused by recreationists.

Trails

1. Construct short loop trails, primarily for natural resource interpretation, to the "40" and Spring Creek (if Spring Creek becomes federally owned). Design these trails so they are loops which are located away from the river and do not provide access to it.
2. Close trails to commercial use.
3. Do nothing to encourage use on the old road which parallels the river near the Hendrix Homestead, such as providing parking, publicizing, or locating it on maps.

Character and Scenery

1. Assure that activities carried out on federal lands meet the visual quality objective (VQO) of retention as seen from Highway 141, Oak Ridge Road, and trails.

2. Exceptions to the VQOs are where recreation facilities called for in this plan cannot be built and still meet the VQO, in which case, the facility must be designed to harmonize with the environment to the extent practicable.

Grazing

1. Prevent grazing in this management area unless needed as a tool for managing regeneration and vegetative competition in white oak stands, or for other specific uses which maintain or enhance biological diversity.
2. Build and maintain fences at federal expense where necessary to control livestock.
3. Consider and mitigate long-standing livestock watering needs on lands which may be cut off from the river by lands which become federally owned.

Forestry

1. Do not harvest timber unless active forest management is needed to maintain biological diversity, particularly if needed to perpetuate Oregon white oak communities.
2. Assure diversity of age classes and tree species mixes, considering lands outside as well as inside the boundary.

MANAGEMENT AREA 4

PRIVATE LANDS OUTSIDE THE BUFFER AND OUTSIDE THE RURAL CENTERS

Location

This management area includes all private lands within the boundary which are outside the buffer and outside the rural centers of Husum and BZ Corner (as designated by the Klickitat County Comprehensive Plan). Lands in this management area are not necessarily contiguous and may be located in various parts of the area.

Desired Condition

The landscape is a mixture of agricultural fields, orchards, small woodlots, and farm and rural residences, with the fields and woodlots predominating. Active production of hay and other agricultural products continues to take place. Small stands of timber are occasionally harvested in accordance with state timber practices requirements. The number of residences within the boundary has increased somewhat over what it was in the summer of 1991, but they are located in clusters on land which is least suitable for agricultural production and forest management. Residences, agricultural fields, roads, timber harvest units, and other development activities which are new since the summer of 1991 are located in places where they are not visible from the river. There may be a few new uses which promote, or are compatible with, conservation of farm and forest operations, but other types of uses are absent.

Standards and Guidelines

Forestry

1. Modify timber harvest practices in habitats of known populations of species on the Region 6 Sensitive Species List as necessary to prevent adverse effects to that population.
2. Use current state and county regulations to guide forest practices, except design forestry practices so they are not evident from the river.

Residential and Commercial Development

1. Allow some new single-family residential development, but no new commercial uses other than operating farms, orchards, home occupations and cottage industries, (which includes intensification or enhancement of farm and forestry uses).
2. Allow 1 new dwelling unit to be constructed on each platted lot which is less than 20 acres and currently contains no dwelling unit.
3. Allow no new residences to be developed on lots less than 20 acres which currently contain 1 or more dwelling units.
4. On contiguous ownership parcels larger than 20 acres, allow dwelling units to be constructed so that overall density does not exceed an average of 1 residence per 20 acres.
5. On each parcel over 2 acres, where a new dwelling unit is going to be built, assure that 95% of the land remains undeveloped and is maintained for agriculture or forest stands. Concentrate new residences on the 5% of the land (or 1 acre, whichever is larger) which is least suitable for forestry or agriculture. Density within the 5% is 1 residence per acre with a minimum frontage of 200' on the buffer.
6. Allow temporary exceptions to the above density restrictions only for:
 - (a) Hardship cases - for example, if an ill parent needs care, a trailer could be moved onto the property during the period when care is being given.
 - (b) Construction of a replacement house - an existing house or trailer may be lived in while a new house is being constructed on the property, but not to exceed the time that the new house is completed or three years from the time construction of the new house begins, whichever is shorter.

MANAGEMENT AREA 5

PRIVATE LANDS OUTSIDE THE BUFFER BUT INSIDE THE RURAL CENTERS

Location

This management area includes all private lands within the boundary, which are outside the buffer but inside the rural centers of Husum and BZ Corner as designated by the Klickitat County Comprehensive Plan.

Desired Condition

These areas are small, spacious, attractive, rural communities of residences, small businesses, and commercial services which fit into and serve the surrounding farm and forest patterns with no land use or traffic conflicts. There is an absence of large industrial or commercial facilities which are incongruous to the area or adversely affect river values, particularly water quality. The rural centers are served by adequate community water and sewer systems. Buildings and other developments which can be seen from the river are not visually dominant, and portions of the area adjacent to the buffer are community parks.

Standards and Guidelines

Character and Scenery

1. In Husum, assure that new activities or developments within the boundary but outside the buffer are not visually domi-

nant as seen from the river. The visual quality objective, as seen from the river, is partial retention.

2. For BZ Corner, see Management Direction Which Applies to the Whole Area.

Forestry

1. Same as Management Area 4.

Residential and Commercial Development

1. If there is no community sewer system, limit density to 2 units/acre with 100' minimum lot width - new development, including septic drainfields, must be set back 200' from the OHWM.
2. If there is a community sewer system, limit density to 4 units/acre with a setback from the OHWM of 100' or outside the buffer, whichever is greater.
3. In Husum, acquire lands or interests in lands to avoid overdevelopment of the area between the river and Highway 141, and of the area along the west side of the river beginning about 500' downstream from the old bridge.
4. Provide technical assistance, and incentives to help communities develop sewer and water systems as well as community parks to serve river-oriented recreationists.

SECTION III

**IMPLEMENTATION
AND
MONITORING**

SECTION III

IMPLEMENTATION

INTRODUCTION

This section of the management plan describes various aspects of and considerations related to implementation of the management direction contained in Section II.

BOUNDARIES

The boundaries of the White Salmon Wild and Scenic River are as shown on the map of the Preferred Alternative in the FEIS, unless they are amended through a proposed change which has been published in the Federal Register and forwarded to the President of the Senate and Speaker of the House of Representatives for review for 90 days, or are otherwise amended by action of Congress. A detailed map showing the location of the Wild and Scenic River boundaries will be available for review by the public at Forest Service headquarters in Washington D.C., and at the office of the Columbia River Gorge National Scenic Area, in Hood River, Oregon.

If, in the future, a landowner whose lands are presently outside the boundaries, wishes to have the boundaries adjusted to include his or her lands, and the lands significantly contribute to values specifically identified in this plan (or are so identified in the future) for protection or management, the boundary should be amended to include those lands.

ADMINISTRATION

LEAD AGENCY

The Forest Service is responsible for administration of the White Salmon Wild and Scenic River, and will take the lead in such administration through the Columbia River Gorge National Scenic Area office. In this administration it will be necessary to coordinate very closely with

Klickitat County and several of the Washington State agencies which have jurisdiction in the area.

One aspect of such coordination is development of a joint educational program with the state and county to inform residents and other interested groups and individuals about all the requirements which affect lands within the boundary. Coordination with state and county agencies will be aimed at making administration of the river as simple as possible for residents and users to work with and understand.

An important aspect of administering the river is assuring that there is a "river ranger" whose responsibilities include providing information to users about safety, private lands, low-impact use, etc.; checking on special use authorization compliance; monitoring social and physical conditions at the put-ins, take-outs, and along the river; etc.

KLICKITAT COUNTY

Close coordination with Klickitat County is especially important since county officials are responsible for administering the County Shoreline Master Plan and the County Zoning Ordinance, both of which are key elements in assuring that wild and scenic river values are protected. Presently there is an agreement between Klickitat County and the Columbia River Gorge National Scenic Area for mutual benefits to be derived from coordinated "planning and continuing protection and management of lands in Klickitat County which are part of the White Salmon River and Klickitat River components of the National Wild and Scenic Rivers System." This agreement should be continued and a new attachment which spells out specific work to be accomplished in the coming year should be developed annually. Maintaining a close working relationship with Klickitat County is essential

The only way the Forest Service can exercise authority over land within the boundary which remains in private ownership is by purchasing rights through a scenic easement. Therefore, it is necessary to develop a working relationship with Klickitat County which will provide the Forest Service with the knowledge of impending development activities and the time to negotiate with the landowners to bring the proposals into compliance with this plan, or to acquire a scenic easement or, if necessary, fee title. Therefore, the Forest Service will work with Klickitat County to:

1. develop and implement a procedure for notifying the Forest Service of applications for development activities within the Wild and Scenic River Boundary,
2. have the County require biological or archeological surveys to be done if needed (at Forest Service expense), and
3. have the County provide time in their review process for the Forest Service to perform the needed surveys and consultations with the landowner.

STATE AGENCIES

Several agencies of the State of Washington are especially important to coordinate with because of the responsibilities they have for regulating uses which could take place within the boundary and might have serious effects on the wild and scenic river values.

- Department of Ecology (DOE) - The DOE is responsible for administering the state's nondegradation of water quality program. It is this program through which water quality in the White Salmon River will be monitored and controlled. In addition, DOE is responsible for maintaining a register of surface and ground water claims, adjudication of water rights, and the setting of any minimum in-stream flow requirements.
- Department of Wildlife - The Department of Wildlife is responsible for administering the Washington State Hydraulics Code. A hydraulics project approval is required for any work that will "use, divert, obstruct, or

change the natural flow or bed" of all state waters. The code applies to all work to be performed below the ordinary high water line. In addition, the plan calls for working with the Department of Wildlife in the accomplishment of fish habitat improvement projects and to develop strong harvest regulations for the protection of resident fish populations. Coordination with the department will be required in both areas.

- Department of Natural Resources (DNR) - The DNR administers the state's Forest Practices Act which regulates and approves timber harvest and associated practices on private lands. The Forest Service also will work with DNR to develop an agreement similar to the procedures to be established with Klickitat County (mentioned in the preceding section). The agreement with DNR would cover timber sale activities that are proposed on private land within the boundaries. In addition, this management plan is predicated on the assumption that a three-way land exchange will be consummated between SDS Lumber Company, the DNR, and the Forest Service. A close working relationship with the agency is required from both standpoints.

TASK FORCE

Sec. 11.(b)(1) of the Wild and Scenic Rivers Act says that "...the Secretary of Agriculture...shall assist, advise, and cooperate with States or their political subdivisions, landowners, private organizations, or individuals to plan, protect, and manage river resources." Based on this authorization, the Forest Service will establish and consult frequently with a task force made up of one representative from each of the following agencies, organizations, or groups:

- Klickitat County
- WA Department of Wildlife
- WA Department of Ecology
- Pacific Power
- Yakima Indian Nation
- Klickitat-Cascade Mid Columbia River Council
- non-farm local (within the boundary) landowners

- local commercial agricultural landowners
- Friends of the White Salmon
- commercial river guides
- Washington Environmental Council
- the commercial launch-site operator
- a private boating club

Consultations will be for the purpose of receiving information from the representatives as to how river management is affecting the groups they represent, identifying new problems, identifying alternative solutions for problems, and determining potential effects of the solutions.

DESIGNATION OF THE UPPER RIVER

If Congress adds the upper White Salmon River to the National Wild and Scenic River System, this plan may need to be revised to bring it in line with congressional direction, or to address administration of the river as a whole if Congress does not provide such direction.

ACQUISITION OF LAND OR RIGHTS

The federal government does not have authority to regulate what happens on private land unless it has acquired the rights to do so. Many of the goals and actions called for in Section II of this plan cannot be accomplished except through voluntary compliance by the landowners, technical assistance, purchase or acceptance of donations of partial rights to land through a scenic easement, or acquisition of fee title to land. Therefore, obtaining compliance with this Plan will require several different approaches:

- the Forest Service must establish a program of incentives to gain cooperation of the landowners within the boundary to voluntarily comply with the direction in this plan;
- the Forest Service will encourage formation of a land trust; and
- where necessary, the Forest Service will acquire the appropriate rights, as funds are available, to meet the intent of the management plan.

Priorities for acquisition are to:

1. Exchange for all SDS Lumber Company lands within the Wild and Scenic River boundary;
2. Maintain the river's free-flowing character and water quality;
3. Protect and enhance the river's outstandingly remarkable values;
4. Acquire rights within the buffer which are needed in order to implement this management plan;
5. Achieve other management objectives specifically identified in this plan.

It is important to remember that the acquisition of SDS Lumber Company lands through exchange is one of the key features in making this a workable plan. This three-way exchange between SDS Lumber Company, the Washington Department of Natural Resources, and the Forest Service is a fairly complex undertaking which will extend over a substantial period of time. It is necessary for the Forest Service to aggressively pursue the exchange in order for it to be accomplished in as short a period of time as possible.

It must also be remembered that priorities 2 and 3 are required in the Wild and Scenic Rivers Act, and, because of that legal mandate, may be pursued during the process of working on the exchange. In fact, as opportunities arise, any of the priorities may be acted on ahead of the others, but not to jeopardize accomplishment of a higher priority.

An overall land acquisition plan will be developed within one year of the date of approval of this plan so landowners can be informed about how their properties fit into the needs for the area within the Wild and Scenic River boundary. Acquisition of necessary properties and scenic easements will be started early, rather than waiting to react to project proposals.

The intent of this plan is that the Forest Service will request Congress to authorize additional acres of acquisition for fee title within the boundary since, when the land exchange with SDS Lumber Company is consummated, it will bring the amount of fee title acquired to the

maximum allowed in the Wild and Scenic Rivers Act. This could cause a hardship to some landowners if they would prefer to sell their land outright rather than sell a scenic easement, and there was no possibility for the Forest Service to acquire fee title to it. The request to Congress should be to authorize 150 acres of fee title acquisition per river mile instead of the 100 acre limit in the current Act. This would allow for a total of 1,155 acres rather than 770 acres.

The Forest Service will not use condemnation to acquire scenic easements or fee title to lands unless that is needed, as a last resort, after all other measures have failed, and then only to prevent imminent, serious, adverse effects to the river area. This does not preclude the use of condemnation when necessary to clear title or to establish value when the Forest Service and a willing seller cannot agree on price (friendly condemnation).

BUDGET

The projects and acquisition proposals contained in this plan will be translated into multi-year program budget proposals that identify needed expenditures. The budget proposals are submitted through normal Forest Service budget processes. A final budget for any fiscal year (October 1 of one calendar year through September 30 of the next calendar year) is the result of negotiation between the Congress of the United States and the Administration, as well as an allocation process among all the Forest Service units by the higher offices of the Forest Service. Upon approval of a final budget for the Columbia River Gorge National Scenic Area, the program of work for that fiscal year will be finalized and carried out. Since the actual amount of work which can be accomplished depends to a great degree on the final budget, and that may vary considerably from the budget proposal, it is not possible to say with assurance when or if the proposed projects and land acquisition, or the management direction, in this plan will be carried out fully.

AMENDMENTS

This plan may be amended if conditions warrant. As management goals and direction are applied on the ground, as new information is learned about resources, or as other conditions change, the desired conditions, management direction, and activities included in this plan may no longer be appropriate. In such cases, activities may be adjusted to fit the resource, or management direction, as stated in the plan, may be amended.

Plan amendments will be made by the area manager of the Columbia River Gorge National Scenic Area. Based on an analysis of the desired conditions, the standards and guidelines, the issue under consideration, and the perceived public interest, the area manager will determine whether a proposed amendment would result in a significant change to the plan. If the change resulting from the proposed amendment is determined to be significant, the area manager will follow the same procedure as that required for development and approval of this plan. If the change resulting from the proposed amendment is determined not to be significant for the purposes of the planning process, the area manager may implement the amendment following satisfactory completion of NEPA procedures. An annual summary of amendments will be prepared and incorporated into this plan, and will be made available to interested parties.

REVISION

This plan will ordinarily be revised on a 10-year cycle, or at least every 15 years. It may also be revised when monitoring and evaluation indicate that conditions or demands within or near the boundary have changed significantly, or when the Area Manager determines that changes in major external policies, goals, or objectives would have a significant effect on the ability to implement the plan. Two significant potential changes which have already been identified that might cause revisions in this plan are:

1. a decision to reintroduce anadromous fish above Condit dam, and

2. a decision by Congress to designate the upper White Salmon River as part of the National Wild and Scenic River System.

A revised plan would have to be considered and approved in accordance with the requirements for the development of this original plan.

MONITORING

Monitoring is the observation and recording of conditions which have been of concern in this plan. It is done to see if the desired conditions which are described in Section II of the plan are being achieved on the ground. If those desired results are not being achieved, it is either because the management direction is not being followed, or, if the management direction is being followed, because the understanding of the relationships between causes and effects have been in error. Monitoring is intended to discover those situations where the desired conditions are not being met and to identify whether it is because management direction is not being implemented properly or if

the cause and effect relationships need to be better defined.

In addition to monitoring, which usually observes conditions in the field after activities have been carried out, there is a process of reviewing proposed activities before they are carried out to determine if they have been planned in a way which meets the management direction and would be expected to result in achieving the desired conditions. Review of environmental analysis reports, and review of applications for timber practices, or proposed developments, construction, or land divisions are all examples of this review process. At this stage, attempts will be made to assure that all proposals conform to the management direction in this plan. Activities which take place as part of this review process are not included in the monitoring plan.

The Monitoring Plan on the following pages presents the items which will be monitored and some of the other important aspects of the monitoring program for the White Salmon River.

MONITORING PLAN¹

Items to be Monitored	Units of Measure	Suggested Method of Monitoring	Monitoring Frequency	Reliability ²	Variability Threshold ³	Annual Cost
Sensitive cultural sites	Sites	Field inspection of known sites	Varies by sensitivity - at least once per month	High	Unacceptable damage by projects or vandalism of any known sites	\$2,000
Water quality and quantity	A water quality and quantity monitoring plan will be developed jointly with the Washington Department of Ecology and the Underwood Conservation District. This information will be established at that time.					\$40,000
Fish populations and habitat	A detailed plan for monitoring and protecting fish populations and habitats will be developed in cooperation with the Washington Department of Wildlife. This information will be established at that time.					\$3,000
Vegetative communities	Acres (on federal lands or lands with scenic easements)	Field and aerial photo inventories of vegetative communities	Every three years	Moderate to high	>20% loss of any community in short supply	\$4,000
Population trends of pileated woodpecker	Number of breeding pairs of pileated woodpeckers	Breeding and occupancy surveys of identified habitat	Every 2 years	Moderate	Loss of any breeding pairs	\$1,000
Species on the Region 6 Sensitive Species List (plants and animals)	Acres, colonies, individuals	Inventory known populations and project areas	Annually	Moderate	Loss of any individual or colony of T&E species or >10% loss of sensitive species. >10% loss of existing habitat	\$4,000
Animals which may be affected by increasing recreation use	Number of animals	Occupancy surveys of selected species	Every 2 years	Moderate	>10% reduction in any population attributable to recreation use.	\$2,000
Perceptions of river crowding	A "limits of acceptable change" process will be conducted to determine the standards for river crowding. This information will be established at that time.					\$5,000
Safety of whitewater boating	Accidents, near misses, and safety complaints	Documentation of reported accidents, near misses, and complaints, and interviews when possible	Sporadic in response to reports or complaints	Moderate	Any fatality or serious injury, an identified pattern of minor injuries, or an increasing trend of complaints	\$1,000
Conflict among recreation user types (including off-road users of vehicles) and between recreationists and private land owners	Number of complaints or observed conflicts	Field observation at likely times and places of conflict, documentation of complaints, and interviews when possible	Sporadic in response to complaints and probability for conflicts	Moderate	An identified pattern or increasing trend of observations or complaints	\$1,000

MONITORING PLAN (continued)

Items to be Monitored	Units of Measure	Suggested Method of Monitoring	Monitoring Frequency	Reliability ²	Variability Threshold ³	Annual Cost
Resource damage in dispersed areas caused by recreationists including off-road use of vehicles	Damaged vegetation or exposed, displaced, or compacted soil	Field surveys	Annually	High	Any damage which persists more than one year.	\$2,000
Compliance of developments or activities with Management Plan standards	Number of completed developments or activities not meeting standards	Field review of completed activities and developments	Sporadic in response to completion of activities	High	>5% of completed activities do not meet standards	\$3,000
Character of the river area	Number of new developments or activities visually evident from the river	Field reviews	Annually	High	Any new developments or activities	\$500
	Area of disturbed buffer vegetation	Field reviews	Annually	High	>200 square feet in one disturbance or more than 15 separate disturbances <200 square feet.	\$500
	Density of housing inside and outside rural centers	Aerial Photo interpretation	Every three years	High	Density exceeds standards on >5% of the land.	\$2,000
	Number of unapproved activities or developments	Aerial photo interpretation and field reviews	Every three years	High	> three unapproved activities	\$2,000

¹Responsibility for monitoring activities lies with the river manager. However, these activities may be carried out by other specialists who, in many cases, will determine the specific monitoring techniques to be used based on the specific situation.

²The degree to which the monitoring results are expected to reflect actual conditions.

³The amount of allowable variation beyond which serious evaluation will be done and possibly some strong actions will be taken to prevent further change.

PLANNED ACTIVITIES

This section displays the construction projects which are identified in the plan and which will play a key role in assuring that the desired conditions will be achieved. As discussed in the section on Budgets, if budget allocations do not match requests, some of these projects may not be completed when scheduled.

The projects in this schedule will be reviewed on an annual basis. As more experience is gained in managing the wild and scenic river and as various conditions change, the priorities shown in this schedule may be altered, some projects may be deleted, or some new projects may be added. As this occurs, this Management Plan will be amended.

SCHEDULE OF PLANNED ACTIVITIES

Fiscal Year	Description	Estimated Cost ¹	Outputs
'92	- Install interpretation/information signs at the launch site	\$8,000	25 PAOT
'92	- Install interpretation/information signs at the take-out	\$8,000	25 PAOT
'92	- Install a water-level gauge visible from bridge in Husum	\$2,500	1 Gauge
'92	- Install a warning sign upstream from Husum Falls	\$1,000	1 Sign
	TOTAL	\$19,500	
'93	- Improve the take-out above Husum Falls to increase safety and prevent bank erosion.	\$5,000	8 PAOT
'93	- Improve safety of the portage trail at Husum Falls	\$5,000	20 PAOT
	TOTAL	\$10,000	
'94	- Construct a short loop trail, trailhead, sanitation facilities, and interpretive signs at the "40"	\$150,000	50 PAOT
'94	- Preserve historic river-related structures.	\$25,000	5 Structures
	TOTAL	\$175,000	
'95	- In Husum, construct picnic facilities, a river viewpoint, sanitation facilities, an interpretation facility, and parking associated with the take-out, and sanitation facilities associated with the portage around the falls	\$225,000	115 PAOT
'95	- Obliterate unnecessary roads on federal lands	\$50,000	10 Miles
'95	- Build fences to keep livestock from trespassing on federal lands.	\$20,000	10 Miles
	TOTAL	\$295,000	

SCHEDULE OF PLANNED ACTIVITIES (continued)

Fiscal Year	Description	Estimated Cost ¹	Outputs
'96	- Construct a river-accessed picnic site with sanitation facilities at the old Hendrix Homestead	\$35,000	50 PAOT
'96	- Construct a river-accessed picnic site with sanitation facilities at Spring Creek	\$50,000	50 PAOT
'96	- Construct a short loop trail, trailhead, sanitation facilities, and interpretive signs in the Spring Creek area	\$100,000	50 PAOT
'96	- Habitat improvement projects - Maintain or enhance habitats of threatened, endangered, and sensitive species.	\$10,000	15 Acres
'96	- Habitat improvement projects - Maintain or enhance habitats of the management indicator specie for mature and overmature successional stages (pileated woodpecker) within the buffer and on federal lands.	\$10,000	100 Acres
'96	- Habitat improvement projects - Manipulate vegetation to perpetuate Oregon white oak communities on federal lands.	<u>\$10,000</u>	50 Acres
	TOTAL	\$215,000	
'97	- Construct picnic facilities, a river viewpoint, sanitation facilities, and parking in the BZ Corner Area	\$100,000	50 PAOT
'97	- Habitat improvement projects - Maintain or enhance habitats of threatened, endangered, and sensitive species.	\$10,000	10 Acres
'97	- Habitat improvement projects - Maintain or enhance habitats of the management indicator specie for mature and overmature successional stages (pileated woodpecker) within the buffer and on federal lands.	\$10,000	100 Acres
'97	- Habitat improvement projects - Manipulate vegetation to perpetuate Oregon white oak communities on federal lands.	<u>\$10,000</u>	50 Acres
	TOTAL	\$130,000	
'98	- Construct a put-in between Husum Falls and Rattlesnake Creek which meets challenge level 2 standards of accessibility	\$25,000	10 PAOT
'98	- Habitat improvement projects - Maintain or enhance habitats of threatened, endangered, and sensitive species.	\$10,000	10 Acres
'98	- Habitat improvement projects - Maintain or enhance habitats of the management indicator specie for mature and overmature successional stages (pileated woodpecker) within the buffer and on federal lands.	\$10,000	100 Acres
'98	- Habitat improvement projects - Manipulate vegetation to perpetuate Oregon white oak communities on federal lands.	<u>\$10,000</u>	50 Acres
	TOTAL	\$55,000	

¹These costs do not include any costs for planning and design.

SECTION IV

IMPORTANT AUTHORITIES AND REGULATIONS

SECTION IV

SUMMARY OF IMPORTANT AUTHORITIES AND REGULATIONS

WILD AND SCENIC RIVERS ACT

(NOTE: This is only a summary of the Wild and Scenic Rivers Act. For full details, see the full Act.)

PURPOSE

To preserve designated rivers in free flowing condition, protect the water quality of those rivers, and protect them and their immediate environments for the benefit and enjoyment of present and future generations. [Sec. 1(b)]

GENERAL MANAGEMENT DIRECTION

Each component of the National Wild and Scenic Rivers System shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archeologic, and scientific features. [Sec. 10(a)]

SCENIC RIVER CRITERIA

Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. [Sec. 2(b)(2)]

ACQUISITION

The appropriate Secretary is authorized to acquire lands and interests in land within the authorized boundaries, but shall not acquire fee title to an

average of more than 100 acres per mile on both sides of the river. [Sec. 6(a)(1)]

CONDEMNATION (Eminent Domain)

If 50 per cent or more of the entire acreage outside of the ordinary high water mark on both sides of the river is owned in fee title by the United States, by the State or States within which it lies, or by political subdivisions of those States, fee title to any lands shall not be acquired by condemnation under authority of this Act. This shall not preclude the use of condemnation when necessary to clear title or to acquire scenic easements or other such easements as are reasonably necessary to give the public access to the river and to permit its members to traverse the length of the area or of selected segments thereof. [Sec. 6(b)]

PROTECTION

The appropriate Secretary having jurisdiction over any lands which include, border upon, or are adjacent to, any designated river or study river, shall take such action respecting management policies, regulations, contracts, plans, affecting such lands, as may be necessary to protect such rivers in accordance with the purposes of this Act. Particular attention shall be given to scheduled timber harvesting, road construction, and similar activities which might be contrary to the purposes of this Act. [Sec. 12(a)]

POLLUTION

The head of any agency administering a component of the National Wild and Scenic Rivers System shall cooperate with the Administrator,

Environmental Protection Agency and the appropriate State water pollution control agencies for the purpose of eliminating or diminishing the pollution of waters of the river. [Sec. 12(c)]

WATER RESOURCES PROJECTS

The Federal Power Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act on or directly affecting any river which is designated as a component of the National Wild and Scenic Rivers System, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established. [Sec. 7(a)]

COOPERATION AND ASSISTANCE

The Secretary of Agriculture or the head of any Federal agency shall assist, advise, and cooperate with States or their political subdivisions, landowners, private organizations, or individuals to plan, protect, and manage river resources. Such assistance, advice, and cooperation may be through written agreements or otherwise. This authority applies with or outside a federally administered area and applies to rivers which are components of the Wild and Scenic Rivers System and to other rivers. Any agreement under

this section may include provisions for limited financial or other assistance to encourage participation in the acquisition, protection, and management of river resources. [Sec. 11(b)(1)]

FREE-FLOWING

As used in the Act, the term "free-flowing," as applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. Even though low dams, diversion works, or other minor structures may have been in existence at the time the river was designated, this shall not be construed to authorize, intend, or encourage future construction of such structures. [Sec. 16(b)]

SCENIC EASEMENTS

As used in the Act, the term "scenic easement" means the right to control the use of land (including the air space above such land) within the authorized boundaries of the river, for the purpose of protecting the natural qualities, but such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement. The acquisition of fee title with the reservation of regular existing uses to the owner shall be treated as a scenic easement for the purposes of the Act. [Sec. 16(c)]

NATIONAL WILD AND SCENIC RIVERS SYSTEM; FINAL REVISED GUIDELINES FOR ELIGIBILITY, CLASSIFICATION, AND MANAGEMENT OF RIVER AREAS

(NOTE: This is only a summary of the Revised Guidelines. For full details, see the full document.)

SCENIC RIVER AREA CLASSIFICATION CRITERIA INTERPRETATIONS:

"Shorelines or watersheds still largely primitive." The river segment's shorelines and immediate environment should not show substantial evidence of human activity. The portion of the watershed within the boundary of the scenic river may have some discernible existing development.

"Largely primitive" means that the shorelines and the immediate river environment still present an overall natural character, but that in places land may be developed for agricultural purposes. Row crops would be considered as meeting the test of "largely primitive," as would timber harvest and other resource use providing such activity is accomplished without a substantial adverse effect on the natural appearance of the river or its immediate environment. [Classification (2) b.]

"Shorelines largely undeveloped" means that any structures or concentration of structures must be limited to relatively short reaches of the total area under consideration . . . [Classification (2) c.]

"Accessible in places by road" means that roads may reach the river area and occasionally bridge the river. . . . [Classification (2) d.]

GENERAL MANAGEMENT PRINCIPLES

Section 10(a) of the Act is interpreted as stating a nondegradation and enhancement policy for all designated river areas, regardless of classification. Each component will be managed to protect and enhance the values for which the river was designated, while providing for public recreation and resource uses which do not adversely impact

or degrade those values. Specific management strategies will always be designed to protect and enhance the values of the river area. Land uses and developments on private lands within the river area which were in existence when the river was designated may be permitted to continue. New land uses must be evaluated for their compatibility with the purposes of the Act.

CARRYING CAPACITY

Perform studies to determine the quantity and mixture of recreation and other public use which can be permitted without adverse impact on the resource values of the river area.

PUBLIC USE AND ACCESS

Regulate public use where necessary to protect and enhance the resource values of the river area. Public use may be controlled by limiting access to the river, by issuing permits, or by other means available to the managing agency through its general statutory authorities.

BASIC FACILITIES

The managing agency may provide basic facilities to absorb user impacts on the resource. In scenic and recreational river areas, simple comfort and convenience facilities such as toilets, shelters, fireplaces, picnic table and refuse containers are appropriate. When placed within the river area, these will be judiciously located to protect the values of popular areas from the impacts of public use.

MAJOR FACILITIES

Major public use facilities, such as developed campgrounds, major visitor centers, and administrative headquarters will, where feasible, be located outside the river area.

AGRICULTURAL AND FORESTRY PRACTICES

Agricultural and forestry practices should be similar in nature and intensity to those present in the area at the time of designation. Rowcrop production and timber harvest may be practiced in recreational and scenic river areas. Timber harvest in any river area will be conducted so as to avoid adverse impacts on the river area values.

OTHER RESOURCE MANAGEMENT PRACTICES

Resource management practices will be limited to those which are necessary for protection, conservation, rehabilitation or enhancement of the river area resources. Such features as trail bridges, fences, water bars and drainage ditches, flow measurement devices and other minor structures or management practices are permitted when such practices are compatible with the classification of the river area and provided that

the area remains natural in appearance and the practices or structures harmonize with the surrounding environment.

WATER QUALITY

River managers will work with local authorities to abate activities within the river area which are degrading or would degrade existing water quality.

LAND USE CONTROLS

Existing patterns of land use and ownership should be maintained, provided they remain consistent with the purposes of the Act. Where land use controls are necessary to protect river area values, the managing agency will utilize a full range of land-use control measures including zoning, easements, and fee acquisition.

SHORELINE MASTER PLAN KEY USE REGULATIONS

(NOTE: This is only a summary of the Shoreline Master Plan regulations. For full details, see the full Shoreline Master Plan.)

APPLICABILITY

The Klickitat County Shoreline Master Plan was created in response to the Washington State Shorelines Management Act of 1971. It has just undergone a major revision which went into effect in July of 1990. The Shoreline Master Plan applies to land extending landward 200 feet from the ordinary high water mark (OHWM) or floodways (whichever is greater) of several streams within the wild and scenic river boundary - the White Salmon River and its major tributaries, Buck Creek, Gilmer Creek, and Rattlesnake Creek. Of these, the White Salmon River is a shoreline of state-wide significance (SSWS). The Shoreline Master Plan is an overlay of the County Zoning Ordinance.

ENVIRONMENT DESIGNATIONS

The Shoreline Master Plan divides the shorelines of the designated portion of the White Salmon River and its major tributaries into three different categories, or "Environments": Community, Rural, and Conservancy. These "Environments" specify the type and level of regulations which apply to the various types of development and uses.

Natural Buffer Zone

As part of each of the other "environments," the first 50 feet on each side of the river, is designated a natural buffer zone. The purpose of this zone is to establish an undisturbed buffer of natural vegetation in order to preserve the shoreline's natural riparian zone, to assure water quality, and to preserve aesthetic qualities and unique natural resources along the shorelines. With some exceptions, the natural buffer zone allows only minor vegetative modification that does not substantially alter the visual character or adversely affect riparian structure and function. Development of structures is excluded

from this zone for purposes other than flood control, erosion control, water-dependent uses, or access to banks.

Community Environment

The purpose of the Community Environment is to encourage residential, recreational, and commercial uses to locate here, at moderate intensities, rather than in the other areas. This Environment covers those areas with concentrations of development, which are presently unincorporated but which are planned to accommodate community expansion.

The shorelines in the vicinity of the communities of BZ Corner and Husum are designated Community. This is approximately 17% of the total shorelines area.

Rural Environment

The purpose of the Rural Environment is to protect agricultural lands from urban expansion by assuring that they are maintained in existing agricultural use or open space. Moderate intensity recreation use (if it is compatible with agricultural activities) and low density rural residential use are considered appropriate. This Environment is intended to cover those areas having high capability to support the commercial production of agricultural crops.

The only area along the designated portion of the White Salmon River which is designated Rural, is a segment along the east side of the river, which extends north from the bridge in BZ Corner about 1,700 feet. This is about 2% of the total shoreline of the designated section.

Conservancy Environment

The purpose of the Conservancy Environment is to protect, conserve and manage existing natural resources and/or unique, valuable, esthetic, historic and cultural areas in order to achieve sustained resource utilization and provide recreational opportunities. It is characterized by very

low intensity land uses primarily related to natural resources use and diffused recreational development, relatively low land values, relatively minor public and private capital investment, and/or relatively severe biophysical limitations.

All the shoreline of the White Salmon River between BZ Corner and Husum, and from Husum to the downstream existing river boundary at Buck Creek, as well as the shorelines of the major tributaries, are designated Conservancy. This is about 81% of the shoreline adjacent to the designated portion of the White Salmon River.

KEY USE REGULATIONS FOR IMPORTANT ACTIVITIES

Agriculture

Conservancy - No direct runoff, overflow, or leaching of manure into a water body. Feedlots, stockpiles of manure, etc. must be located outside the Shorelines Area. Streambanks must be protected from damage due to the over-concentration of livestock. Application of agricultural chemicals must meet local, state, and federal policies and regs. All structures requiring a shoreline location must be set back at least 50' unless water dependent. Structures must be set back 100' if they do not require a shoreline location.

Rural - Same as Conservancy.

Community - Same as Conservancy.

Forest Management

Conservancy - A one-time harvest of 30% of merchantable timber is allowed within the 50' natural buffer zone. In remainder of Shoreline Area, a 30% harvest is allowed every 10 years. Requires a Substantial Development Permit from County Planning Dept.

Rural - Same as Conservancy.

Community - Same as Conservancy, except no County permit is required.

Commercial Development

Conservancy - Prohibited along the White Salmon River. On the tributaries, developments related to or dependent on a shoreline location are permitted as a conditional use with a 100' setback from the OHWM. Since

there is no specific frontage requirement for commercial structures, the underlying zone standard of a 100-foot lot width applies.

Adequate public access should be provided.

Rural - On the White Salmon River, regulations are the same as the tributaries in the Conservancy environment, except lot width may be 50' or 100' depending on whether the underlying zone is rural center or rural residential. (None of the other "shorelines" are designated Rural within the wild and scenic river boundary.)

Community - Same as the tributaries in the Conservancy environment, except commercial developments are permitted outright (rather than as a conditional use) and lot width is 50' since the underlying zone is rural center.

Recreational Development

Conservancy - Conditional Use. Must protect the natural features of the land, its vegetation, wildlife, water quality, aquatic life and habitat, scenic views and esthetic values. The removal of vegetation shall be limited to that needed for permitted structures or facilities. Must provide facilities for non-motorized access to the shoreline.

Rural - Same as Conservancy.

Community - Permitted use. Same regulations as Conservancy.

Residential

Conservancy - Residential structures, including accessory uses and facilities must be compatible with the esthetic values of the area, including preserving shoreline vegetation. New residences must be set back 100' from the OHWM, and along the White Salmon River must have a river frontage of 660'. Lots which existed before the 1990 Update, but do not meet these criteria are grandfathered.

Rural - Same as Conservancy except river frontage along the White Salmon River must be 416'.

Community - Same as Conservancy except setback from the OHWM is 50', and along the White Salmon River river frontage is 104' (½ acre minimum lot size).

Marinas and Boating Facilities (includes ramp, launch, moorage, etc.)

Conservancy - None on free-flowing portion, conditional use elsewhere. Must be esthetically compatible with or enhance existing shoreline features and uses in order that views from the uplands and the water are not significantly diminished. No covered moorage. No live-a-boards. Ramps for individual residences are allowed if banks are less than 25% and substantial grading or shoreline defense works are not needed.

Rural - Same as Conservancy.

Community - Same as Conservancy.

Piers and Docks

Conservancy - Conditional Use. (It isn't clear that this is separate from a boating facility. It may, therefore, be prohibited from free-flowing portion.)

Rural - Same as Conservancy.

Community - Same as Conservancy.

Outdoor Signs and Billboards

Conservancy - Permitted use. No signs on trees or other natural features. Off-premise signs prohibited except for community identification, information, or directions. Signs in the natural buffer zone limited to safety information and directions.

Rural - Same as Conservancy.

Community - Same as Conservancy.

Roads and Railroads

Conservancy - New roads permitted, but no new railroads. Waste material must be removed or distributed to restore or improve esthetic value. Location and construction must not adversely affect shoreline resources. Minimize or prevent the need for shoreline protective measures such as riprap or other bank stabilization. Must fit existing topography to minimize cuts and fills and alterations of natural conditions.

Rural - New roads and railroads permitted with same regulations as Conservancy.

Community - New roads and railroads permitted with same regulations as Conservancy.

Mining

Conservancy - Conditional use. Policy is that "Local governments should strictly control or prohibit the removal of sand and gravel from shorelines." Excavation of sand, gravel, and other minerals must be done in conformance to all federal, state, and local regulations (State Dept. of Wildlife or Fisheries must approve applications for any construction within the ordinary high water zone).

Rural - Same as Conservancy.

Community - Same as Conservancy.

Dredging

Conservancy - Conditional use. Shall not occur in floodways except for gravel bar scalping for sand or gravel.

Rural - Same as Conservancy.

Community - Same as Conservancy.

Landfilling

Conservancy - Conditional use. Use pile or pier supports whenever feasible in preference to landfilling (except for repair or upgrading of existing roads). Not allowed within floodways. Not permitted where it would adversely alter natural drainage and circulation patterns, currents, river flows, or significantly reduce flood water capacities.

Rural - Same as Conservancy.

Community - Same as Conservancy.

Shoreline Alteration

Conservancy - Conditional Use. Structural solutions allowed only if non-structural solutions would not be able to reduce the damage. River channel direction modification, realignment and straightening are prohibited unless they are essential to uses consistent with this plan. Alterations must, to the extent possible, be constructed to allow for channel migration, and shall not reduce the volume and storage capacity of rivers and adjacent wetlands or flood plains.

Rural - Same as Conservancy.

Community - Same as Conservancy.

SUMMARY OF KLIKITAT COUNTY ZONING ORDINANCE - No. 62678 (as amended)

(NOTE: This is only a summary of the zoning ordinance. For full details, see the full ordinance.)

There are three different zones which cover the lands within the boundary of the White Salmon Wild and Scenic River:

1. Rural Center
2. Rural Residential
3. Resource Lands District

RURAL CENTER

The purpose of this district is to provide for the location of small businesses and commercial services in rural areas for the convenience of residents. The uses are intended to fit into farm and rural patterns of development without creating land use or traffic conflicts.

The communities of Husum and BZ Corner are covered by this Zone.

Principle Uses Permitted Outright

Examples include:

- Agriculturally oriented commercial or industrial use.
- Business or professional office.
- Feed store, florist, nursery, grocery, bakery, general store.
- Cabinet or carpenter shop.
- Auto or equipment repair.
- Community center or other public building.
- Bank.
- Single family dwelling, mobile home, duplex.
- School, church.
- Restaurant, bar.
- Agriculture and horticulture uses.

Conditional Uses

Examples include:

- Veterinary clinic, kennel.
- Planned District
- Mobile home park, multiple dwelling structure of 3 to 6 units.

Residential Density Provisions

Lot Size - minimum lot area of 5,000 square feet for areas served by a public or community water and sewer system. If no systems, lot size is based on need to protect public health.

Minimum Lot Width - 50'

Building Height - 40'

RURAL RESIDENTIAL

The purpose of this district is to maintain openness and the rural character of the countryside, to protect the county's water and other natural resources, and to provide areas for typical rural development of all kinds.

Lands adjacent to Highway 141 for about 1 mile north of BZ Corner, and about 1-1/2 miles south of Husum are covered by this zone.

Principle Uses Permitted Outright

Examples include:

- Agriculture, including dwellings and other customary buildings.
- Single-family dwelling, mobile home.
- Home occupation.
- Planned District.
- Other legal uses, activities, products, etc. associated with wild or managed forests.

Conditional Uses

Examples include:

- Farm labor camp, mobile home park.
- Fairground, rodeo ground, riding stable, kennel, gun club, guest ranch.
- Excavation and processing of sand, gravel, etc.
- Airport, solid waste disposal.
- Facilities for communications transmission or reception.
- School, church, community center.
- Commercial or industrial activity directly serving agricultural operations.
- Golf course, picnic area, and other open-land, non-intensive recreational use.

Residential Density Provisions

Lot Size - minimum of 2 acres.

Minimum Lot Width - 100'

RESOURCE LANDS DISTRICT

The purposes of this district are to provide land for present and future commercial farm and forest operations in areas of productive soils and other conditions suitable for the continued success of such operations, and minimize conflicts between farm and forest practices and various nonfarm uses by allowing development of such land in accordance with resource and development suitability of the individual parcels within the district.

This zone covers all the area within the boundary which is not within the Rural Center or Rural Residential zones. It is the majority of the area.

Principle Uses Permitted Outright

Examples include:

- Farm and forest use.
- All land use activities, operations, structures, and other facilities necessary for agriculture, dairy, grazing, horticulture, forestry, wild

land, wildlife reservations, and watershed protection areas, including up to 3 dwelling units for farm laborers.

- Fishing lake, rearing pond, hunting preserve, etc.
- Single-family dwelling, mobile home, and seasonal home.
- Home occupations.
- Commercial or industrial activity directly serving agriculture and timber operations.

Conditional Uses

Examples include:

- Multi-family residential dwelling, condominium.
- School, church, convent.
- Fire station, community center.
- Utility and communication facility, except service or storage building or yard.
- Quarry, mine, sand and gravel pit.
- Airport.
- Park, playground, golf course, country club, riding academy, camping club, recreation and conservation club, private club, lodge.
- Farm laborer dwelling and facilities of more than 3 dwellings.

Residential Density Provisions

Process - Upon receipt of an application, the County Planning Department evaluates the ownership parcel to determine suitability for resource production and for residential development. Land is delineated as best, good, and

limited suitability for resource production and development.

Density Matrix - Based on the suitability map, the matrices below are used to assign dwelling unit densities for single-family units and clustering of homesite locations to ownership parcels larger than 2 acres:

SINGLE-FAMILY UNITS

RESOURCE SUITABILITY	DEVELOPMENT SUITABILITY		
	Limited	Good	Best
Best Open Area = 95%	1 d.u./20 ac.	1 d.u./20 ac.	1 d.u./20 ac.
Good Open Area = 85%	1 d.u./20 ac.	1 d.u./10 ac.	1 d.u./5 ac.
Limited Open Area = 75%	1 d.u./5 ac.	3 d.u./ac. ¹	3 d.u./ac. ¹

HOMESITE CLUSTERING

RESOURCE SUITABILITY	DEVELOPMENT SUITABILITY		
	Limited	Good	Best
Best Open Area = 97.5%	1.3 d.u./20 ac.	1.3 d.u./20 ac.	1.3 d.u./20 ac.
Good Open Area = 90%	1.3 d.u./20 ac.	1.3 d.u./10 ac.	1.3 d.u./5 ac.
Limited Open Area = 85%	1.3 d.u./5 ac.	4 d.u./ac. ¹	4 d.u./ac. ¹

d.u. means dwelling unit

ac. means acre

¹ computed within the development area only

Minimum Lot Width - 100 feet

Redivision - No further division of the open area can take place for 5 years.

ADDITIONAL REGULATORY AUTHORITIES

The National Wild and Scenic Rivers Act, the Klickitat County Zoning Ordinance, the Klickitat County Shorelines Management Plan Update, and the Klickitat County Wild and Scenic Rivers Protection Area Overlay Zone have all been described at some length in other sections of this document - the first one in Appendix A, and the other three in the Land Use Controls section of Chapter III.

The following regulatory authorities are in addition to those mentioned above. Their inclusion in this Appendix does not indicate that they are any less important or that their provisions can be ignored. It simply means that it is thought that their requirements may not be as fundamental in understanding some of the major differences in the alternative management strategies that are considered in the body of the document.

The following information was developed by Land and Water Associates.

WASHINGTON STATE HYDRAULIC CODE

Administered by the Washington Department of Wildlife, a hydraulics project approval is required for any work that will "use, divert, obstruct or change the natural flow or bed" of all state waters. The code applies to all work to be performed below the ordinary high water line.

While the code applies to most any type of activity that may take place within the wetted perimeter of waterways, protection of fishlife is the only ground upon which approval can be conditioned or denied. Water quality, riparian environment and esthetics can only be considered if their degradation adversely affects fish life.

The Department of Wildlife strongly encourages non-structural solutions to bank protection problems, such as willow waddling, log emplacement, and upstream pool construction to slow flows. It also considers the cumulative impacts of successive permits, particularly regarding stream channelization.

Forest Practices permits and Shorelines Substantial Development permits are routed through the Department of Wildlife when activities are proposed within the wetted perimeter of streams. However, the Department does not routinely notify the County Planning Department about hydraulics project approvals.

WASHINGTON STATE FOREST PRACTICES ACT

Administered by the Washington Department of Natural Resources, this Act applies to non-federal forested lands. The law regulates timber harvesting and associated practices to allow timber production while protecting fish and wildlife habitat.

Forest Practices regulations address timber harvesting, reforestation, forest chemicals, and road construction and maintenance. Particular attention is paid to river corridors, where riparian management zones of specified width are established in which a certain number of snags, small caliper trees, large conifers, and hardwoods must be retained. These buffer requirements must be applied in conjunction with the Shorelines Management Plan requirement of cutting no more than 30% of the merchantable stems within 200' of the riverbank every 10 years.

Unless the area is to be converted to other uses, site preparation is required upon harvest, as is reforestation if the harvest exceeds a partial cut of 50% within 5 years.

The Act defines four classes of forest practices. Most timber harvest activities in the White Salmon corridor would be Class III practices, which require a Forest Practices Permit but no State Environmental Policy Act review.

The Forest Practices Act calls for coordination with other laws and programs, particularly the hydraulic project review process and the Shorelines Management Act. Permit applications must delineate affected areas that lie within shorelines. The system is not foolproof: four permits were

recently issued that included land within the shorelines area which were not properly routed through the County Planning Department. Each was issued for an area in which timber harvest is prohibited.

SOUTHWEST WASHINGTON HEALTH DISTRICT SEPTIC SYSTEM SETBACKS

The county regulates location of septic systems to control the quality of ground and surface waters. A septic permit is required. Septic tanks must be 50' from a watercourse and drainfields must be set back 100'. Generally, drainfields are not permitted in areas with soils that are either too slowly permeable or excessively permeable, where the water table is within 5 feet of the surface, where slopes are greater than 15%, or where surface water drains over the site. Septic systems are allowed within the 100-year flood plain if flood-water infiltration into the system and sewage escapement into flood-waters is "minimized."

CURRENT USE ASSESSMENT

Although not land use controls per se, two state laws have a significant influence on land use. The Classified Forest Lands Program addresses large commercial forest land holdings and the Open Space Tax Act (RCW 84.34) addresses smaller timbered parcels, agricultural lands, and open space. Both laws are designed to preserve agricultural land, forest land, and open space in the state by offering preferred property tax rates to owners of qualifying lands. Most of the private commercial timber land and agricultural land along the White Salmon River is enrolled in one of the current use tax programs.

Agricultural land can be of any acreage as long as it is used for commercial purposes and can meet minimum gross income levels. Timber land must be five or more acres (20 acres in the Classified Forest Lands program) and must be actively managed for timber harvest. Open space lands are those zoned as such, or any lands where preservation would conserve or provide natural, scenic, recreational, or historic resources. Presumably, unmanaged timber lands could qualify as open space. Owners of open space

lands may have to allow some limited public use in order for their lands to qualify for the program (Shipp, 1989).

Lands must remain in the program for at least ten years. After ten years, land removed from the program is subject to the difference between the current use tax rate and the fair market tax rate for the last seven years, plus interest. There are specified instances when land is not subjected to this tax, such as when it is transferred to a governmental entity. Current use values for agricultural and forest lands are developed by factoring in crop values, production costs, loan rates, and property tax rates. Potential uses of lands are not considered when establishing their current use tax rate, nor are values of neighboring properties not in the current use tax program.

Open space valuation is not well developed in the county. The only existing guideline is that it cannot be less than the value of the land if used for agriculture. A public benefit rating system would help guide the county assessor; such rating systems are being used by other counties in Washington but not presently in Klickitat County (Shipp, 1989).

OTHER FEDERAL AUTHORITIES

Clean Water Act of 1972

- sets standards for municipal, industrial, and other point sources of pollution
- requires development of state and local nonpoint source pollutant control programs
- dredge and fill regulations (streams, lakes, wetlands)

Safe Drinking Water Act of 1974

- regulates quality of public drinking water sources

Endangered Species Act of 1972

- protects species of plants and animals which are in serious decline

Fish and Wildlife Coordination Act

- requires coordination with U.S. Fish and Wildlife Service on certain projects affecting wildlife

Yakima Treaty of 1855 and Subsequent Legislation

- off-reservation treaty rights (ceded and other lands) - includes fishing at usual and customary sites (including right of access across private lands) and hunting, gathering and pasturing on open, unclaimed, and unoccupied lands
- in-lieu fishing sites

National Environmental Policy Act of 1969

- requires interdisciplinary environmental review by federal agencies on all federal projects
- requires an EIS for all "major federal actions significantly affecting the quality of the environment"

Federal Insecticide, Fungicide, and Rodenticide Act

- authorizes the U.S. Environmental Protection Agency to establish pesticide licensing and use regulations

OTHER WASHINGTON STATE AUTHORITIES

Water Quality and Allocation Laws

- Waste Discharge Permits issued by the Department of Ecology (DOE) for point sources of pollution
- water quality permitting done in conjunction with federal requirements
- nonpoint pollution control regulations written into Forest Practice Act
- Section 208 and 319 (Clean Water Act) programs
- minimum flow requirements (DOE IFIM program - not yet implemented on the White Salmon River)
- prior appropriations doctrine (first in time, first in right)

Shoreline Management Act of 1971 (SMA)

- establishes authority for coordinated planning of private and public shoreline development

- defines "shorelines" and "shorelines of state-wide significance" and mandates that management of the latter shall consider the interests of the state over local interests
- requires development of local shorelines master plans, and provides guidance towards that end
- requires local designation of environmental management zones with defined land use controls
- creates a permitting process for all "substantial developments" (\$2,500 +) within shorelines all shorelines

State Environmental Policy Act (SEPA)

- establishes authority for regulations to maintain environmental quality
- requires local governmental implementation of the act
- provides for DOE review of local planning and project approvals
- requires an "environment check list" for defined "actions"
- requires an EIS for "actions determined to have a potential adverse effect on the environment"

Cultural Protection Law (effective 7/23/89)

- establishes legal protection for archaeological objects and sites, Indian and historic graves on private as well as public lands

Landowner Liability Limitation Act (RCW 2.24200-210)

- encourages owners of land and water areas to make them available to the public for recreational purposes by limiting their liability for unintentional injuries to such users unless "dangerous artificial latent conditions" exist "for which warning signs have not been conspicuously posted"

State Pesticide Laws, as Amended (RCW 15.58 and 17.21)

- establishes responsibility for pesticide licensing and use regulations with the State Department of Agriculture.

OTHER KLICKITAT COUNTY AUTHORITIES

Comprehensive Plan

- policy statement regarding physical development of the county
- serves as the guideline for preparation and implementation of the zoning ordinance and other official controls

Flood Plain Management Ordinance

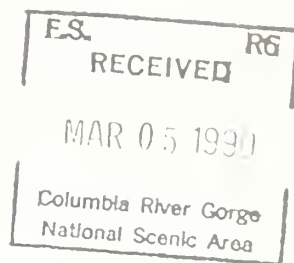
- establishes standards and permitting mechanisms for a defined "flood-way" and "special flood hazard zone" (100 year flood plain)

- purpose of standards is to minimize damage to flood plain structures as well as off-site flood/erosion/sedimentation damage

Klickitat County Solid Waste Management Plan

- the 1989 Comprehensive Solid Waste Management Plan consists of plan elements for waste reduction, recycling, transportation and collection, transfer, disposal, and administration

AGREEMENT
between
Klickitat County
and
Columbia River Gorge National Scenic Area
USDA Forest Service



This agreement is entered into by and between the U. S. Department of Agriculture, Forest Service, hereinafter referred to as the Forest Service, acting by and through the Regional Forester of the Pacific Northwest Region, and Klickitat County, State of Washington, herein referred to as Klickitat County, under the authority of Public Law 90-542.

Public Law 90-542, as amended, (16 U.S.C. 1281-1287) directs the Secretary of Agriculture to assist, advise, and cooperate with States or their political subdivisions to plan, protect, and manage river resources. Such assistance, advice, and cooperation may be through written agreements or otherwise, applies to rivers which are components of the national wild and scenic rivers system, and may include provisions for limited financial or other assistance to encourage participation. [P.L. 90-542, Sec. 11(b)(1)]

Portions of the White Salmon River and the Klickitat River were designated as components of the national wild and scenic rivers system on November 17, 1986, in the same legislation that established the Columbia River Gorge National Scenic Area. The Forest Service is responsible for developing a management plan for the protection and enhancement of the values which caused the rivers to be included in the system. Both rivers are located in Klickitat County in the State of Washington. All land adjacent to the designated portion of the White Salmon River and most of the land along the designated portion of the Klickitat River is private.

Since most of the land along the rivers is private, it comes under the control of the Klickitat County Zoning Ordinance. The first 200 feet of land above mean high water falls under The Shoreline Management Act, a 1971 Washington State law whose purpose is to protect the unique and diverse shoreline areas of Washington State against poor management and destructive usage through a sound, comprehensive management program. Klickitat County has the responsibility to administer the provisions of that Act through the Klickitat County Shorelines Master Plan.

The ability of the Forest Service to control uses and developments within the Wild and Scenic River boundaries is limited to encouragement of the private landowners to voluntarily comply with the provisions of the management plan or acquiring the rights to the private land, either in fee simple or through scenic easements. Acquisition of fee simple rights is limited in the Wild and Scenic Rivers Act to an average of 100 acres per mile on both sides of the river.

Due to the overlapping responsibilities of the Forest Service and Klickitat County for the land along the two rivers, and the difficulty for either party to satisfactorily manage those lands alone, it is to the benefit of both parties to cooperate in the planning and administration of the rivers.

In consideration of these conditions and mutual benefits, it is agreed by the parties that Klickitat County, in consultation with the Forest Service, will perform a number of functions to assist the Forest Service in the planning, and the continuing protection and management of lands in Klickitat County which are part of the White Salmon River and Klickitat River components of the national wild and scenic rivers system.

The specific functions, and the terms and conditions for work performed and payment, will be mutually agreed upon by the Forest Service and Klickitat County, will be described in detail in attachments to this agreement, and will be secured through the issuance of purchase orders.

Nothing herein shall be considered as obligating the Forest Service to expend, or as involving the United States in any contract or other obligation for the future payment of money in excess of appropriations authorized by law and administratively allocated for this work.

No member of, or Delegate to, Congress shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

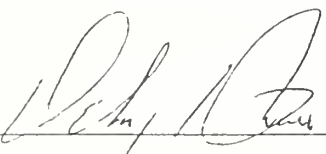
The extension of benefits under the provisions of this agreement shall be without discrimination as to race, color, creed, sex, or national origin.

This agreement shall be effective upon execution by both parties hereto.

Either party may terminate this agreement by providing 30 days written notice. In such case, payment will be made for work completed up to and including the date of termination.

KLICKITAT COUNTY

FOREST SERVICE

By  Pro for

Chairman, Klickitat County Board
of County Commissioners

Date 2/12/90

By 

Manager, Columbia River Gorge
National Scenic Area

Date 1/5/90

APPROVED AS TO FORM:


Gerald A. Matosich
Prosecuting Attorney

PARTICIPANTS/CONTACTS:

Klickitat County

Contact: Francine Havercroft
Planning Director
Klickitat County Planning Department
228 West Main, Room 150
Goldendale, WA 98620
(509) 773-5703

USDA Forest Service
Columbia River Gorge
National Scenic Area

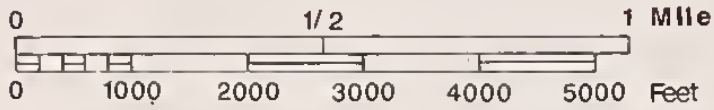
Contact: Steve Mellor,
Wild and Scenic River Planner
902 Wasco Ave., Suite 200
Hood River, OR 97031
(503) 386-2333



**MAPS
OF
ALTERNATIVES**

White Salmon National Scenic River

SCALE 1" = 2000 Feet



WATERFALL
RM RIVER MILE

ALTERNATIVE 1

- SCENIC RIVER BOUNDARY
- CABLE LAUNCH
- BOAT RAMP
- PUT IN & TAKE OUT
- PICNIC GROUND

EXISTING COUNTY LAND USE DESIGNATIONS:

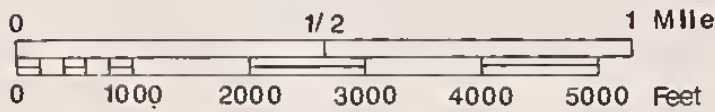
- RURAL CENTER ZONE
- RURAL RESIDENTIAL ZONE
- RESOURCE LANDS ZONE
- SHORELINES OF STATE-WIDE SIGNIFICANCE
- SHORELINES



T 4 N
T 3 N

White Salmon National Scenic River

SCALE 1" = 2000 Feet



- WATERFALL
- RM RIVER MILE

ALTERNATIVE 2

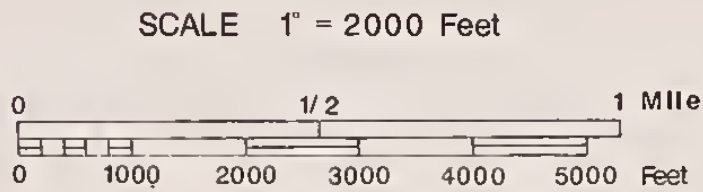
- SCENIC RIVER BOUNDARY
- CABLE LAUNCH
- BOAT RAMP
- PUT IN & TAKE OUT

RIVER BUFFER WIDTH -
400 FEET ON EACH SIDE OF RIVER



This

White Salmon National Scenic River



- WATERFALL
- RM RIVER MILE

ALTERNATIVE 3

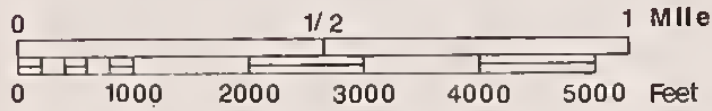
- SCENIC RIVER BOUNDARY
- CABLE LAUNCH
- BOAT RAMP
- PUT IN & TAKE OUT
- PICNIC GROUND
- BICYCLE TRAIL
- HIKING TRAIL
- NEW PUBLIC ROAD

RIVER BUFFER WIDTH -
200 FEET, ON EACH SIDE OF RIVER



White Salmon National Scenic River

SCALE 1" = 2000 Feet



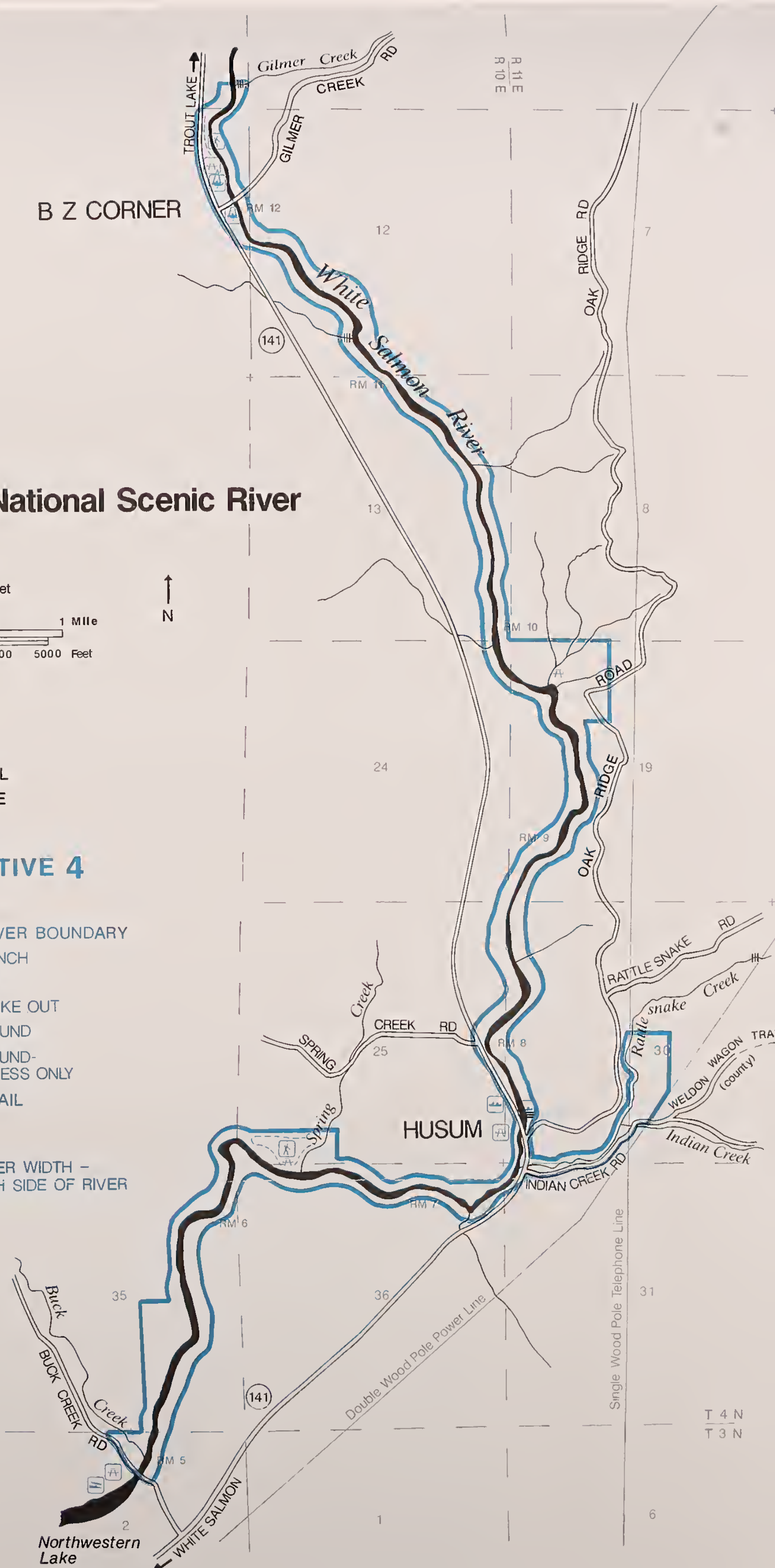
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WATERFALL
RM RIVER MILE

ALTERNATIVE 4

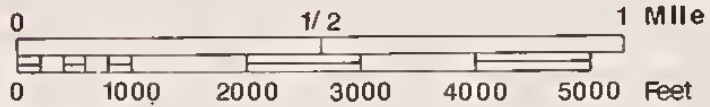
- SCENIC RIVER BOUNDARY
- CABLE LAUNCH
- BOAT RAMP
- PUT IN & TAKE OUT
- PICNIC GROUND
- PICNIC GROUND- RIVER ACCESS ONLY
- HIKING TRAIL

RIVER BUFFER WIDTH -
100' FEET ON EACH SIDE OF RIVER



White Salmon National Scenic River

SCALE 1" = 2000 Feet

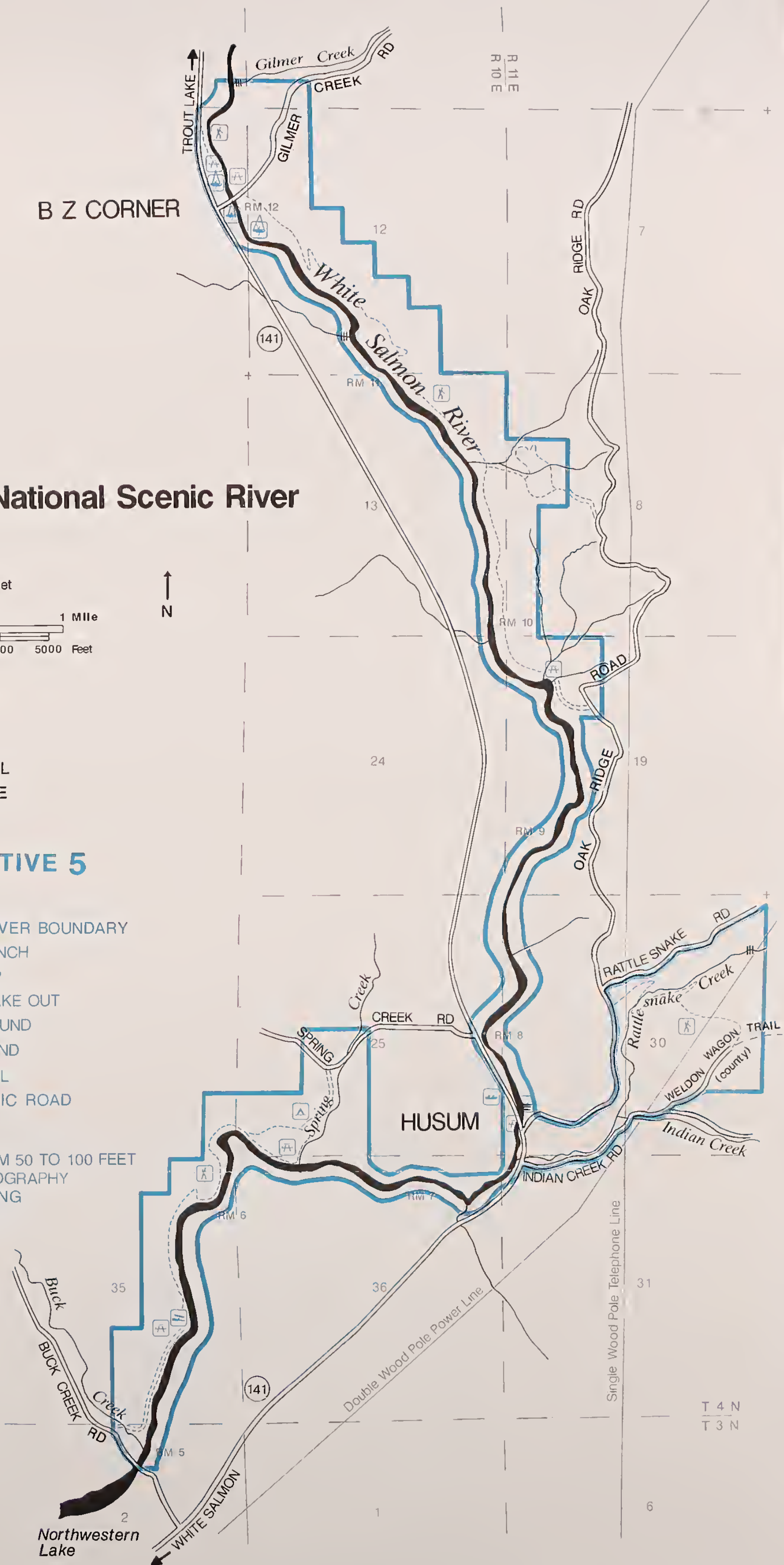


- WATERFALL
- RM RIVER MILE

ALTERNATIVE 5

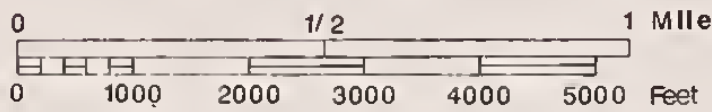
- SCENIC RIVER BOUNDARY
- CABLE LAUNCH
- BOAT RAMP
- PUT IN & TAKE OUT
- PICNIC GROUND
- CAMPGROUND
- HIKING TRAIL
- NEW PUBLIC ROAD

RIVER BUFFER VARIES FROM 50 TO 100 FEET
DEPENDING ON TOPOGRAPHY
AND SCREENING



White Salmon National Scenic River

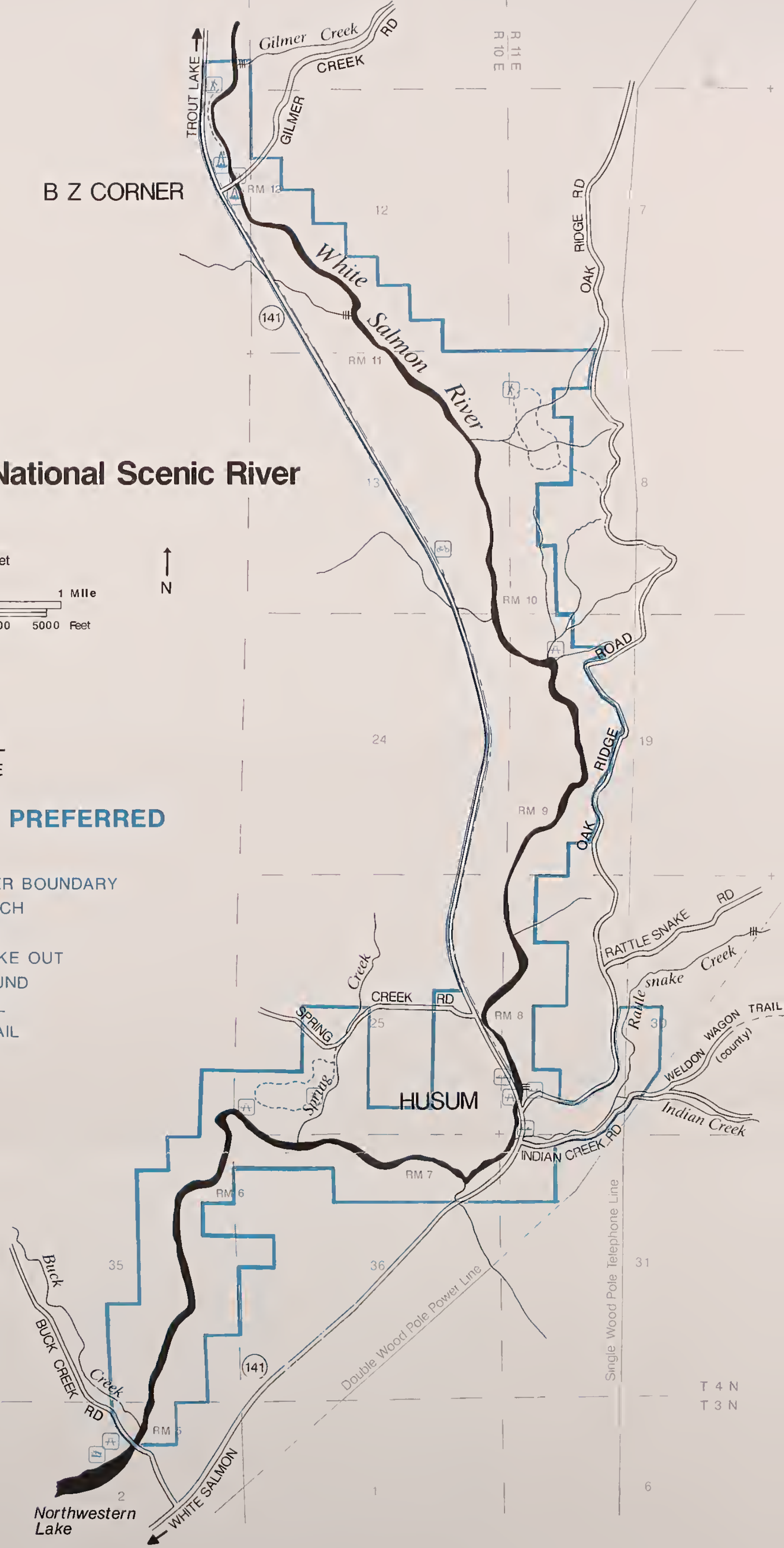
SCALE 1" = 2000 Feet

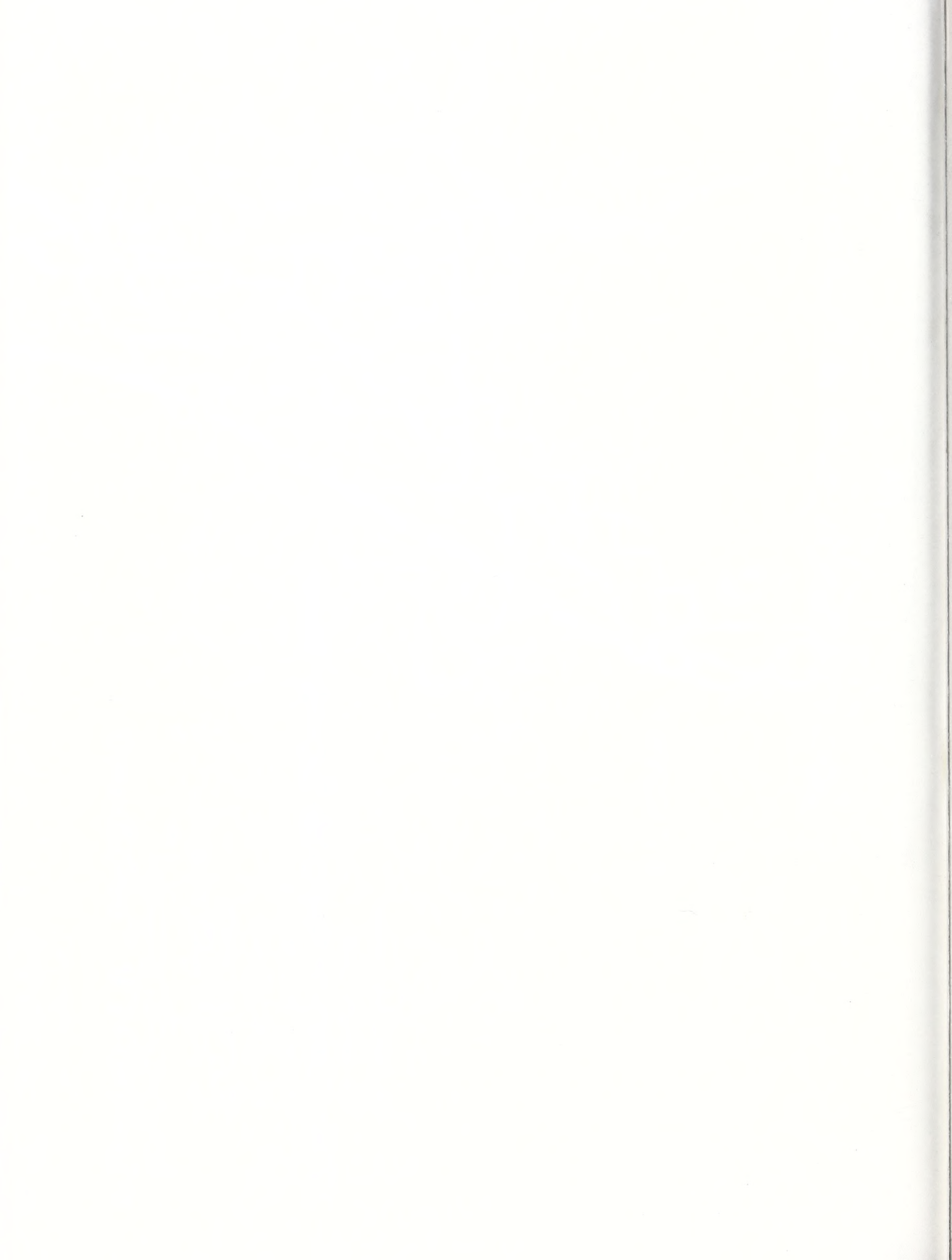


- WATERFALL
- RM RIVER MILE

ALTERNATIVE 6 - PREFERRED

- SCENIC RIVER BOUNDARY
- CABLE LAUNCH
- BOAT RAMP
- PUT IN & TAKE OUT
- PICNIC GROUND
- HIKING TRAIL
- BICYCLE TRAIL







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U.S. DEPARTMENT OF AGRICULTURE
U.S. FOREST SERVICE
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HOOD RIVER, OREGON 97031
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